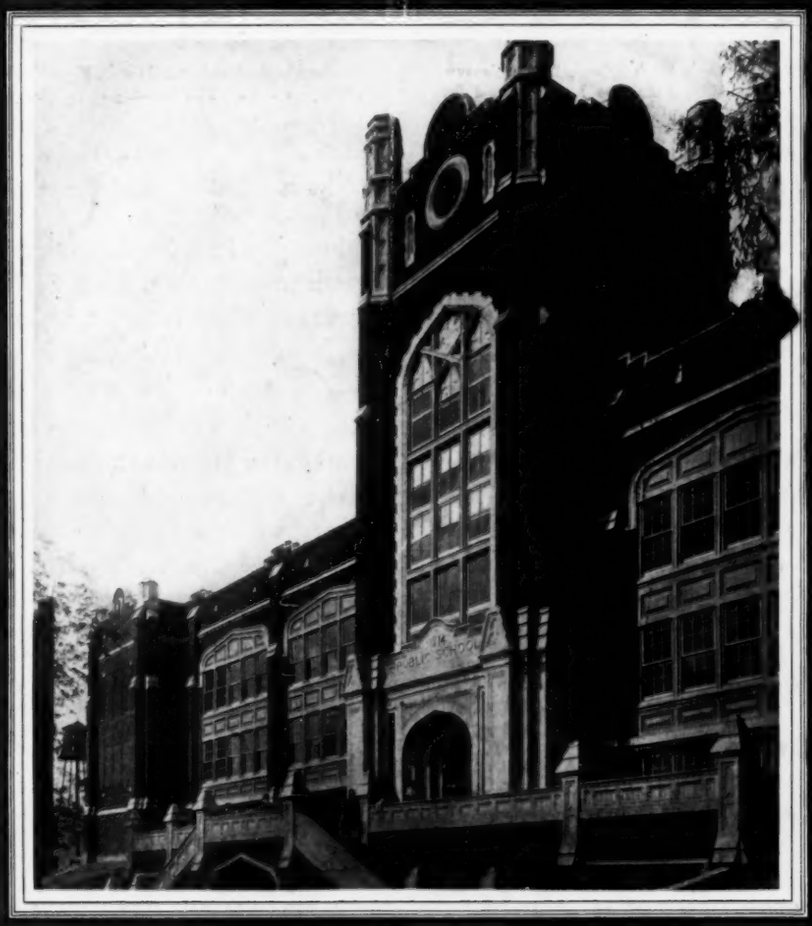
The NATION'S SCHOOLS

DEVOTED TO THE APPLICATION OF RESEARCH TO THE BUILDING, EQUIPMENT AND ADMINISTRATION OF SCHOOLS



AUGUST

1928

Published by THE NATION'S SCHOOLS PUBLISHING CO., Chicago

STATE DOC. DEPARTMENT

150 Pounds Pressure CRANE VALVES 2500 Pounds Pressure

The North Tonawanda High School, North Tonawanda, N. Y. Architects, Tooker & Marsh, New York City. Plumbing Contractors, Matthews Plumbing and Heating Co., Niagara Falls. The building is Crane-equipped.

In old New York State as in new California

Last month, in this publication, was cited a new, thoroughly modern school building in the heart of rural California, equipped with Crane plumbing and heating.

Crossing this month to the other side of the continent, the North Tonawanda High School, North Tonawanda, N. Y., is shown. It too is Crane-equipped.

Starting late and borrowing from the experience of older commonwealths, California has brought its schools to the forefront of American education. New York, manifesting early a deep interest in better education, has never let itself lag behind educational progress.

School officials in both states give careful attention to equipment. And in the older as in the newer state, they manifest a marked preference for the sanitation, economy, and durability of Crane materials.

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It is unnecessary to point out to any one interested in school construction the advantages of permanence and fire safety. Schools built with Truscon Metal Lath in the walls and ceilings, I-Plates for the roof deck, Steel Joists in the floors, and Truscon Steel Windows in the exterior walls, possess these obvious advantages of permanence and safety from fire at the same time that other advantages, such as soundproofness, low maintenance cost, superior daylighting and ventilation and the like are gained. Truscon engineers will cooperate with school board representatives and architects in design of schools where the use of these materials is contemplated.

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Warehouses and Offices in all Principal Cities.

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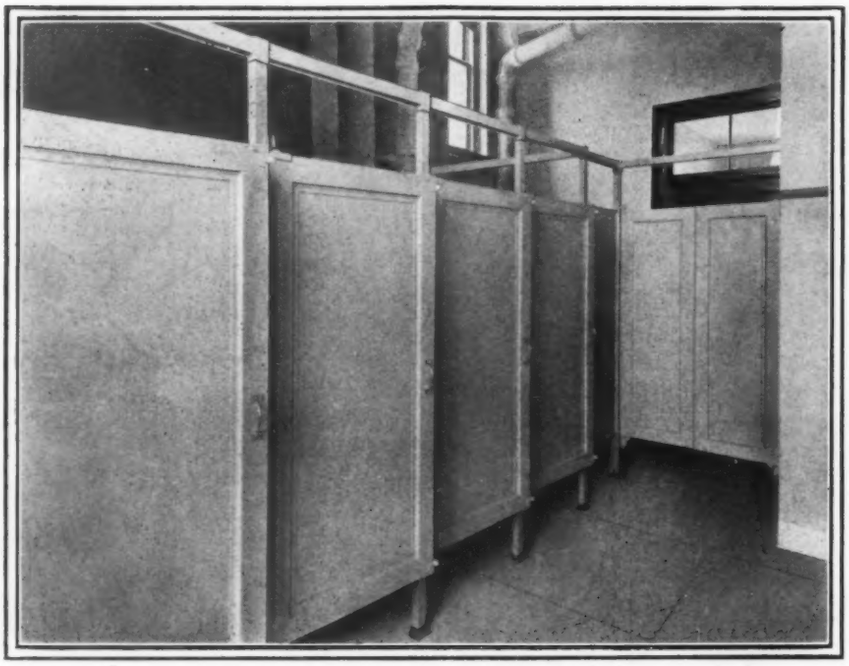

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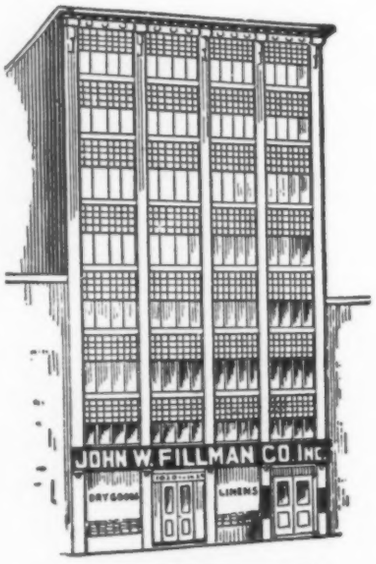
MY! ISN'T IT WARM?



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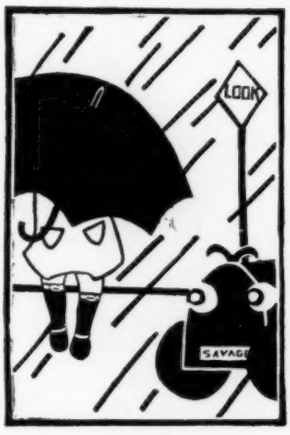

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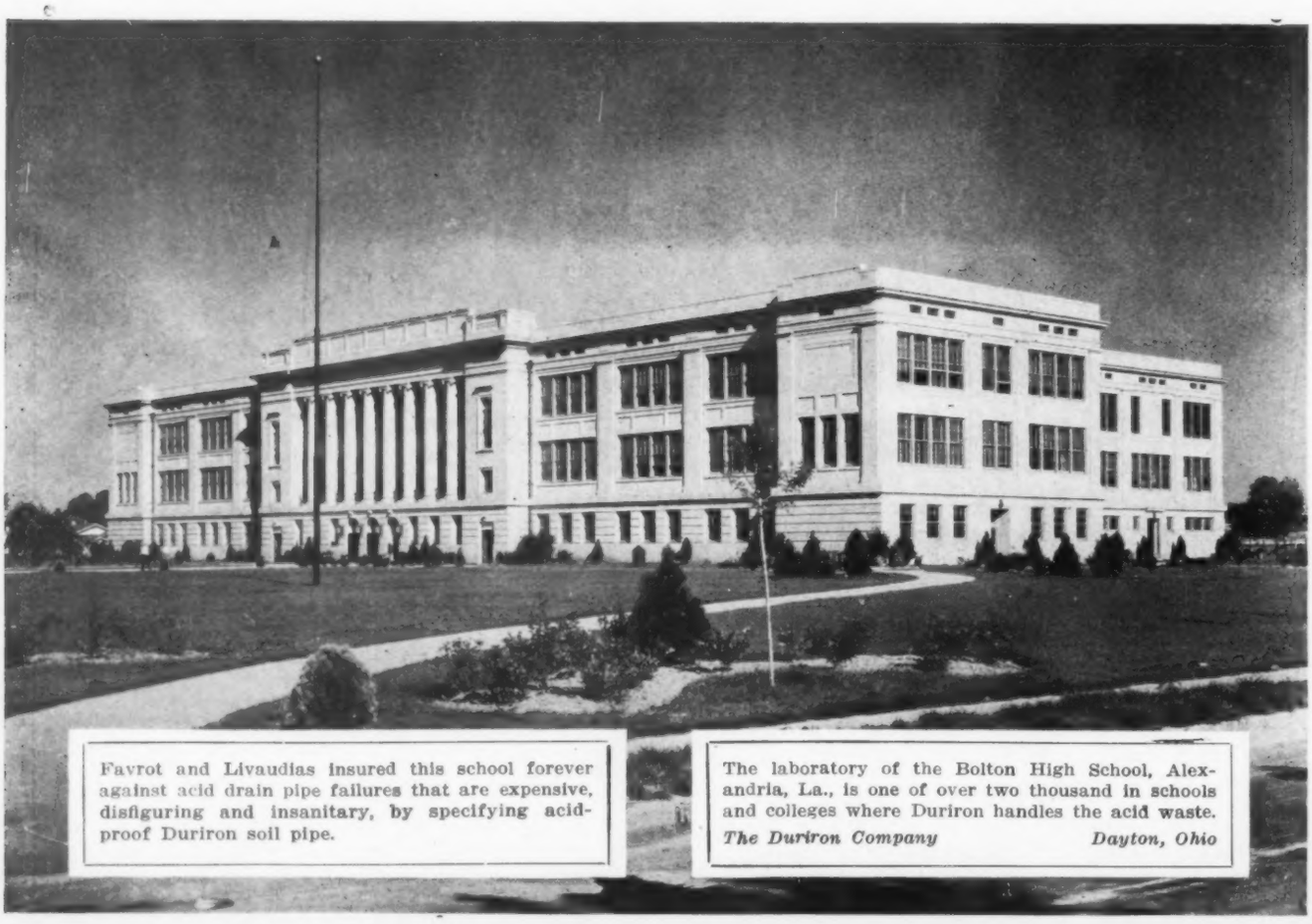

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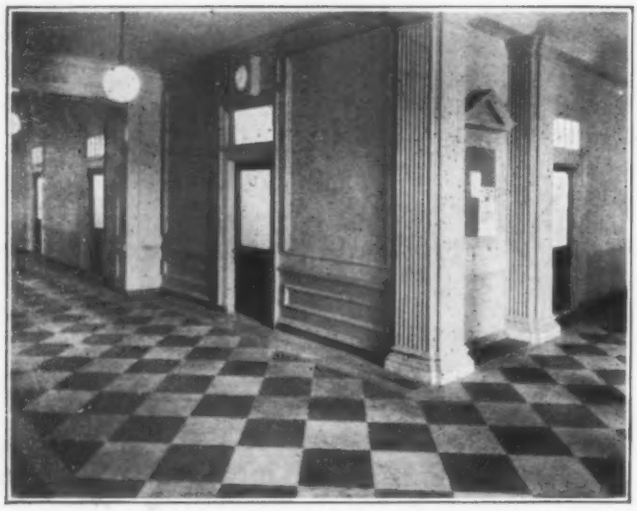

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Fifth—When you compare costs Wright Rubber Tile is in a favorable position and over a period of years will show decided economies.

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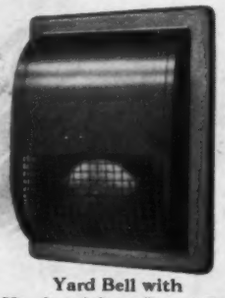

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Type "S" Bell

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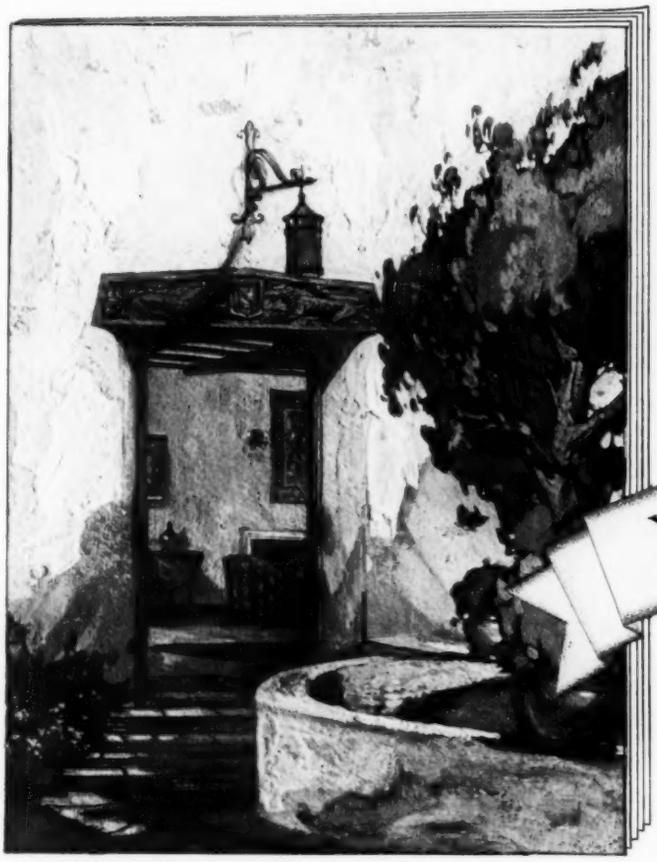

Now plaster can be reinforced with steel, exactly like concrete. How this is done, on walls and ceilings, is described in this beautiful book, which we will send upon receipt of the coupon.

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DUNHAM
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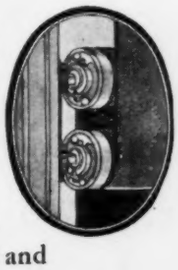

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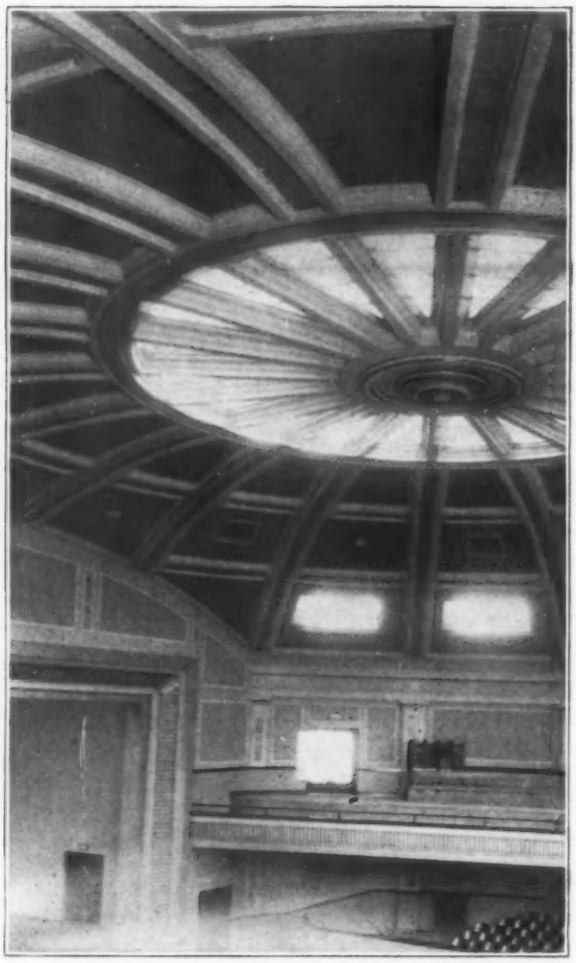

Auditorium, North Side High School, Fort Wayne, Indiana. Acousti-Celotex in the ceiling absorbs disquieting noises and eliminates echoes and reverberations. Arc-Con Specialties Company, Acousti-Celotex Contractor.

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This ***sound-quieting*** makes it much easier for students to concentrate—saves them from the mental slowdown that comes from fatigued nerves.

Acousti-Celotex comes in rigid cane-fibre tiles that are easily applied to the ceilings of any school building, new or old.

Plan now to give your students this protection from nerve-wearing noise—your auditorium this safeguard against poor acoustics.

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ACOUSTI-CELOTEX

FOR LESS NOISE--BETTER HEARING

With the Publisher

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What, then, in the field of school executives, must a business paper such as The NATION'S SCHOOLS offer?

Policy first. An ideal of editorial intent that has general and specific worth.

Editorship. The guidance of men who through actual experience are equipped to deal with the problem at hand.

Editorial content. Not alone articles that are "just the thing," but articles that go a bit beyond—that give the executive insight into things perhaps slightly divergent to his immediate and particular needs. This "step beyond" virtue of a business paper is what truly broadens executive ability and anticipates executive capability.

Advertising content. Always a necessary and essential "bread-and-butter" part of business paper reading. Along with the text pages that speak of procedures and methods, go the advertising displays that present testimony to the things that make up the physical background of the modern school.

Good appearance. This is the final touch, always desirable, always welcomed. Good paper, legible type, plentiful illustrations, a cover that appeals, a convenient size—always necessary for that good "first impression" and "lasting attraction."

Publisher. Integrity, pride, sincerity—words continually used to bespeak publishing ideals. However, intimacy and friendly co-operation are the true binding forces that make the business paper, not a literary ornament, but a practical tool for the workshops of its field.

* * *

Why not a magazine with a high subscription rate and no advertising? That was a question put to us months ago by a school executive, following the first announcement of The NATION'S SCHOOLS. It seems peculiar that such old traditions as "the man with something to sell is the man to mistrust" yet exist. Business is nothing ephemeral. The claims of "service" made by the advertiser to-day are not alluring strains from the harp of a mythical commercial siren. If they were, the "profit through experience" law would wreck American industry in a week's time.

No school executive can expect to "live" with his business paper and not be aware that his profession is surrounded by material substances. If the progress of education is a mental venture, surely it is not isolated from physical realities.

In other words, the school child lives and breathes. Care of his body is as necessary in the school curriculum as is development of his mind. The proper ventilation, heating, sanitation, environment, must be considered. And as these things concern industry and advertising, attention to them should be part and parcel of school ideals.

The school executive sits in an office, the fixtures and furnishings of which have been secured by "barter and exchange." Here he dwells upon an intelligent direction of the adolescent mind. These surroundings of his are intimate factors in his life. Why should they not also be intimate factors in the pages of his business paper?

The NATION'S SCHOOLS.

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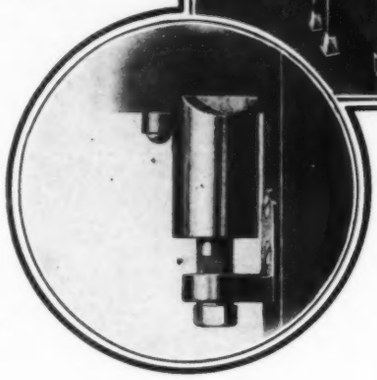

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VOLUME II AUGUST, 1928 NUMBER 2

A Practical Method of Enrolling High-School Pupils

Thorough preparation by the school faculty and strict adherence to the outline of registration routine has minimized confusion and improved first-week conditions

By B. McDANIEL, Principal, Denison High School, Denison, Texas

THE FIRST week of school is often looked upon by teachers as a week of confusion. One often hears the remark that it takes two weeks to get a school organized. It has been our desire to prevent such a condition in our school, and we believe we have so arranged our method of enrolling pupils that we have fully accomplished our purpose.

We enroll nine hundred and fifty in our high school. Our clerk reports for work two weeks before school opens, and the principal has to be in attendance almost constantly during the same time. These two do all the planning and the preliminary work. They see to the printing of all forms, make out all lists, etc. One of the important pieces of work is the making out of the daily schedule. This is first made out on a cardboard, ruled in checkerboard fashion, there being one vertical column for each teacher and one horizontal column for each of the eight periods. The spaces are one inch square.

A Schedule for Each Pupil

After the schedule is thus completed it is typewritten on one page of paper of letter head size. Across the top of the page are four lists or columns called first, second, third, and fourth, and across the lower half are four columns called fifth, sixth, seventh, and eighth. These represent the respective periods. Each column is a list of the subjects taught that period. The eleventh-grade subjects head the list, followed by the tenth, ninth, and eighth, respectively. The number of the room is written after each subject. We have enough of these printed to give each pupil one.

A pupil can look at this sheet and see at a glance at which period and in what room his subjects are taught. The names of the teachers do not appear on this schedule, so the pupil does not know for sure who his teacher will be until he goes to class. This eliminates that perplexing situation of having the pupils overcrowd the classes of the popular teachers.

Courses of Study Available

Before the opening of school the clerk brings up-to-date the pupils' record cards. These are for use on the day of enrollment. This is a small card listing the subjects taken by the pupil, by years and by terms. The credit received in each subject is given. By this card the pupil and the advisory teacher can see instantly the complete school record of the pupil.

We also have printed a copy of our course of study, each pupil being given a copy. It is on one page, and contains a column for each of the five courses—such as Classic Course, Manual Training Course, Commercial Course. Each course is arranged by years beginning with the

freshman year. The required subjects for each year are named first and then the elective ones.

We have printed blank forms to give each pupil on opening day on which his own schedule of classes can be written by the advisory teachers. It is a sheet about six by eight inches, ruled in two columns of four spaces each. The spaces in the first column are numbered 1, 2, 3 and 4. Those in the second column are numbered 5, 6, 7 and 8. These spaces represent the eight periods per day. In each space the advisory teacher writes the name of the subject and the number of the room. A provision is made at the top for the pupil's name, home-room number, and locker number.

Make Use of Newspapers

Pupils know when school will start each year. They are trained to read the local daily paper the week preceding school, especially on Friday and Saturday, for school announcements. Through the press the pupils learn what day to report for classifications.

All pupils coming to our school from the schools outside the city report on Saturday morning at nine o'clock. They are notified to bring their record from the former school. They meet in one of the small study halls. The principal instructs them as to the daily routine of school, course of study, etc. He and the clerk examine their records and determine the number of credits allowed them. These credits are placed on the record cards mentioned above, to be used on the opening day when these pupils report with our own pupils. Later, the credits are transferred to our permanent records by the clerk in the presence of the new pupil so that there will be no future misunderstandings about credits. We return to the new pupil his former record sheet at the Saturday morning conference. In fact, we do not collect them. This saves much annoyance. The new pupil never surrenders his credit sheet, and he sees it transferred to our records. If a pupil has no record from his former school, we send a letter at once requesting one. After a straight quizzing such pupil is given temporary classification until his credits arrive. We keep a list of such pupils as well as a copy of letter so as to check against a pupil getting in without proper credit.

On Saturday at one o'clock our teachers meet for announcements about changes in course of study, assignments of teachers to home rooms, hall duty, etc., for the semester, and the assignment of teachers for the opening days. These assignments have been previously worked out by the principal, and they are made out in writing and posted on the teachers' bulletin board. A copy is given to each teacher of his own particular work so that he will know just what he is expected to do at a certain time. At this meeting every teacher is given any explanations wanted. We feel that this preliminary meeting and work are absolutely essential to our success on the opening days of school. And we feel that we have been amply rewarded.

We take two days to enroll our pupils. The seniors report on Monday at nine o'clock and the juniors at one o'clock. The sophomores report on Tuesday at nine o'clock and the freshmen at one o'clock. When they come they are directed to one of the study halls by the teachers who are assigned to corridor duty. There the principal instructs the whole grade about the subjects they may have to take, the routine for that particular grade, changes made in school since the previous year, etc. They are told how to proceed with enrollment, etc. This takes about fifteen minutes.

Then each pupil is given a copy of the course of study and a copy of the printed daily schedule mentioned above. Two teachers are left in charge of this group to see that none leave except as directed and to keep them quiet and seated. The principal talks about the daily routine, etc. first, and discusses the course of study and daily schedule after each pupil is given a copy. Each pupil is thus given plenty of time to see the course of study.

Preliminary Classification

The teacher in charge has an alphabetical list of each grade. This has been made from our promotion lists from the preceding year. The names of new pupils are inserted by the clerk as they are enrolled on Saturday. This teacher calls the roll one name at a time, sending the pupils downstairs—our study hall is on the third floor—for classification. He calls them just so fast as the counsellors can handle them. He adds any omitted names and erases the names of those who are absent. Some pupil who is present usually knows whether the absentees have moved from the city or are sick and will report later. When all pupils have been passed out by this teacher, he has a complete and correct list of each grade.

The counsellors and several other teachers are stationed in the corridor below the study hall at a series of tables. Along this row of tables each pupil must pass.

Table No. 1 is at the foot of the stairs coming down from the study hall where the pupils are assembled. At this table the clerk and one teacher are seated. They have the pupils' record

cards described above. They also have the permanent records from the office to settle any doubtful points. They give each pupil his record card and a blank form described above on which the counsellors will make out the pupil's own daily schedule. We prefer not to give these blanks to the pupils in the assembly above because we think they should be made out by the counsellors. After receiving the record card and the blank from the clerk, who also has an alphabetical list to check the names, the pupils pass to the next table.

The Counsellors' Table

This is table No. 2. Here are seated about ten teachers who act as counsellors, each with an extra chair. One teacher is assigned in general charge of this group. He points out a vacant chair to the pupils. Here the counsellors go over the pupil's record card, and the two determine what he should take and what he is permitted to take. The teacher fills out the pupil's schedule blank, collects the record card, as well as the printed copy of the daily schedule, and the copy of the course of study given him in the assembly room. The pupil is now through with these. He can have the copy of the course of study if he wishes to take it home.

At table No. 3 are four teachers. They have a copy of the daily schedule ruled in checkerboard fashion on a large cardboard with each blank space about one and one-half inches square. This has been cut horizontally into halves. The upper piece contains the morning classes and the lower one the afternoon classes. One of the first two teachers at this table takes the pupil's daily schedule as made out by the counsellor and calls the morning subjects by periods and rooms and the other teacher puts a tally mark in that particular space on the large schedule. Then the sheet is passed to the next two teachers. One calls the afternoon classes and the other makes a tally in the proper space. This gives a correct count of the number of pupils assigned to each class. When there are enough pupils assigned to any one section or class, these teachers notify the teacher in charge of the counsellors. He tells them to cross out that section and assign no more pupils to it. Thus an overflow in any section is prevented.

The pupil next takes his daily schedule to table No. 4. Three or four teachers are at this table. The pupil is given what we call class cards. It is a small card about one and one-half inches by three inches. It is ruled by four lines running horizontally. The first line is labeled *name*, the second, *subject*, the third, *period*, and the fourth, *room*. Under the directions of these teachers the pupil fills out one card for each of his subjects. He takes his schedule and the cards to table No. 5.

Here are two teachers with a large sheet of paper or a cardboard ruled checkerboard fashion and fastened on the top of a board. There are eight horizontal spaces to correspond to the eight periods, and as many vertical spaces as there are subjects taught in the grade reporting that half day. There is one of these sheets for each of our four grades. Of course, only one is used at a time. This sheet is ruled so that each space is slightly larger than the small class cards. On the first sheet are written the names of the senior studies, on the second sheet are written the names of the junior studies, and so on. At the middle of the right hand edge of each space a six penny finishing nail is driven. The class cards have a hole punched in them at the same place. One teacher takes the pupil's schedule and class cards and sees that they correspond. He gives the schedule back to the pupil who passes to the next table. This first teacher gives the class cards to the other teacher who simply puts them in a stack in the space where they belong. The cards are put on the nails to hold them in position. This work can be done quite rapidly. It is like sorting mail in a mail car. After each grade is enrolled the various teachers come to this table and get the class cards for his or her own classes.

Provides Complete Roll of Classes

Thus, they have a complete class roll that is written by the pupils themselves. The pupils must report to these classes, and to no other, the first day of regular school, which is on Wednesday. The teachers begin to mark regular attendance that day. We find that our method is simple and gives each teacher a correct list of the class.

The pupil has now gone to table No. 6. One teacher is at this table with an alphabetical list of the grade. After each name is written the number of home room and the locker number. This has been prepared by the clerk and principal before school starts. It takes the clerk about half a day to prepare this list. The pupils are assigned to home rooms by grades in alphabetical order. They are given lockers nearest their home rooms. The teacher at this table writes on the pupil's daily schedule in the place for that purpose the number of his home room and his locker number.

This schedule, which the pupil takes home and keeps as a guide for the first few days, contains a list of his classes by periods and room number, and the number of his locker and home room.

When he returns to school on Wednesday, he goes to his locker to put up his cap, etc., then to his home room where the home-room teacher makes a list of home-room pupils the first day. The pupils and teachers are thus ready for classes to start at nine o'clock.

The pupil next goes to table No. 7. Here one teacher gives him a book card that is furnished by our State Department of Education. The teacher, selected because he or she writes well, writes the pupil's name on the card. The pupil next passes to table No. 8.

This table is in front of a classroom door. In this room we have placed the free textbooks. Three teachers work at this table. The first teacher takes the pupil's schedule to see what books the pupil needs. This teacher, having the books stacked on the table, gives the books to the pupil and at the same time calls the name and number of the book to the second teacher sitting next to him. The second teacher has taken the pupil's book card and he now fills in the number of the books, and keeps the pupil's book card as a permanent record for the year as required by our state law. The first teacher returns to the pupil his daily schedule.

The third teacher gives the pupil a paper book cover for each book. These are given free by the local merchants as an advertisement. This teacher also gives the pupil one of our enrollment blanks calling for such information as age, residence, etc. These must be filled out by the parent, so it is given to the pupil at the last table. He must have it filled out by his parents and bring it to his home-room teacher on Wednesday.

No Loitering in Corridors

The pupil is now near one of the outside doors. Our tables have been arranged to that effect. A corridor teacher is on duty here, and he shows the pupils out, as it were. The pupil has everything he needs, and we expect him to leave the building at once so as not to interfere with the work of the school. Corridor teachers allow no one anywhere except along what may be called the line of march.

We have found our plan simple but most complete. The greatest part of the work is done by the office force before school starts. When the pupil leaves the building he has his books, book covers, enrollment blank, and a copy of his own daily schedule. He has had the counsel of one of the teachers in choosing his studies. The principal has instructed him as to routine of the school. When he returns to school on Wednesday, he knows just where to go on arrival and where to go each period during the day.

The teachers find the plan quite satisfactory. Each has had only one thing to do in the enrollment process. Each teacher has a correct list of he pupils in each of his or her classes. This enables the teacher to call the roll and go right to work on Wednesday. The enrollment is handled without any noise or confusion. The pupils simply keep on the move from one table to the next. No talking is allowed except by pupils to the teachers at the tables, a rule that is carefully followed.

System Proves Effective

We have no trouble in enrolling one grade in one-half of a day. Our school enrolls nine hundred and fifty in two days. We could handle twelve hundred in the same time. Larger schools could use the same schemes and have two groups of teachers working in separate parts of the building. One group could handle the boys and the other the girls, or one could handle all pupils whose names begin with the first half of the alphabet and the second group could handle the rest of the pupils. We are pleased with our plan, and we commend it to any school that has found the first few days of school unsatisfactory from the standpoint of confusion.

Efficiency in Management

Efficiency in the management of a school system, as in the management of a private corporation, does not mean niggardly expediture; it means rather, making the best use of the funds appropriated. Increased efficiency may mean that larger appropriations should be made; and, as in a manufacturing plant, it may mean that old methods should be abandoned and newer ones adopted even at great expense.

The school world is now recognizing the fact that efficiency consists in getting the most out of every dollar appropriated and of abandoning old methods when newer ones yield better results. School superintendents now know that if they attack their problems in a scientific way the public, especially that part of the public accustomed to dealing with private and public affairs in a business-like way, will become more interested in the schools.

Studies undertaken by research bureaus are by no means limited to those relating to expenditures. Studies are made to measure the efficiency of teaching, to eliminate waste in subject-matter, to aid the teacher in assisting the individual child, to aid the superintendent and others in the preparation of reports, and to test such experiments as may be under way.

Photos Courtesy National Safety Council.

Safety Education Retards School Accidents

By FLORENCE NELSON, Education Division, National Safety Council, New York City

SAFETY is one of the newer subjects to claim a place for itself in the schools as a result of the increasing complexity of our modern life. No one, for example, will question the need for fortifying the child with knowledge and safe habits to help him face the present dangers of our streets and highways. We have only to glance at the 1927 accident record to learn just how imperative is this need.

Last year there were 95,500 accidental fatalities in the United States from all causes—an increase of some 5,500 over the 1926 record. A comparison with the figures for 1911 shows an increase of twenty per cent in total accidental deaths and *an increase of 1050 per cent in automobile deaths*, the total for the latter being 25,800 for 1927. The automobile, in fact, is the most important agency of accidental fatality in each age group from five to sixty-five; never causing less than one-fifth of all deaths.

Toll of Automobile Accidents

Approximately 20,000 children under fifteen years of age are killed each year in accidents; the three most important causes being the automobile, burns and scalds, and drowning. Accidents rank second in the causes of death to children under five years; first to children from five to fourteen years; second to children from fifteen to nineteen and sixth to persons of all ages.

Twenty-three out of every one hundred persons killed by automobiles in the United States are children under fifteen years of age (6,000 of the 25,800 motor fatalities last year). Even for the two- and three-year old group burns and scalds are the only cause of accidental death more important than the automobile.

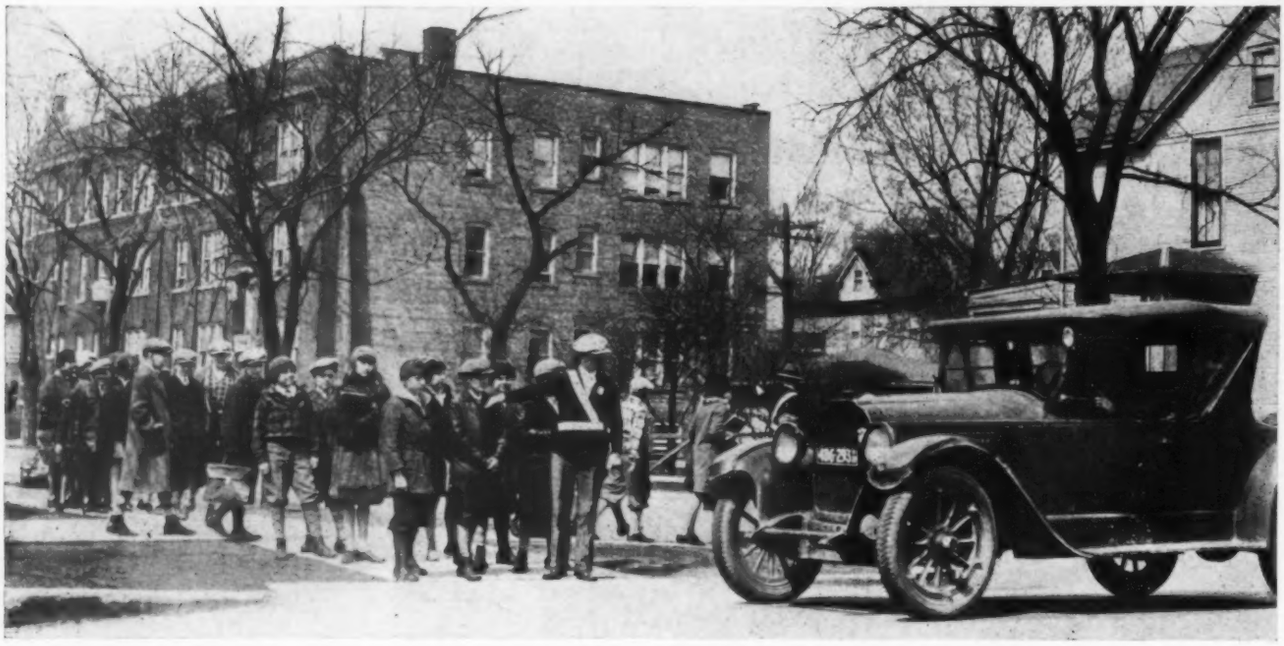
In the home we have another serious accident situation that is taking a toll of some 25,000 lives yearly, or about one-fourth of all accidental deaths. Because of the less spectacular nature of these accidents, and the fact that a large percentage of them are never reported, little attention has been paid to this side of the problem. Only recently has its significance been at all appreciated. The collection and analysis of home accident statistics are still confined to a few localities and a few insurance companies. Falls are the greatest single cause of home accidents, causing thirty-five per cent of all deaths. Asphyxiation and suffocation are responsible for twenty-one per cent and burns and scalds for nineteen per cent.

Frequency of Home Injuries

In a study of 1,050 questionnaires giving the accident experience of children in one of the New York City schools it was discovered that home accidents were far more frequent than those of the highway. These reports were based on the actual knowledge of the children and therefore underestimated the number of home accidents appreciably. The extent and variety of the accidents discovered, together with the frequency with which they happened, gave abundant evidence of the hazards existing in the lives of these children; a condition that exists to a more or less degree in the average home.

Does safety instruction in the school actually have an effect on the child mortality rate in a given community? Here are records of the last two years picked more or less at random from the growing list of cities where safety education has been thoroughly incorporated in the school program.

Cleveland shows a decrease in child accidental



This junior safety patrol officer is directing traffic from the sidewalk.

deaths on the streets and in the homes from 130 in 1926 to 115 in 1927. Serious traffic injuries to children of school age were likewise reduced from 215 in 1926 to 188 in 1927.

In Newark, N. J., one of the first cities to organize safety patrols, thirty-seven children were killed in traffic accidents in 1919. In 1926 this figure dropped to seventeen.

In 1924 Superintendent Hartley of Louisville appointed Mrs. Frances Miner supervisor of health and safety. Mrs. Miner organized safety work throughout the schools with emphasis on safety patrols. The motor fatalities to children of school age had totaled twenty-three the year before. They dropped to fourteen during the first year of the new plan and to eight in 1926.

Detroit Accident Death Rate Decreases

In the first five years following the appointment of Harriet Beard as supervisor of safety teaching, the accident death rate of Detroit school children dropped forty-seven per cent; in the face of an enormous increase in the school population and in the number of automobiles on the city streets.

In St. Louis where special emphasis has been placed on safety education during the past year there were twenty-nine motor vehicle fatalities to children of school age in 1927 as compared with forty-seven in 1926. In Boston fifty-nine children were killed in 1924. As a result of a safety program organized during that year by the Massachusetts Safety Council the number was reduced to forty-one in 1925 and to thirty-nine in 1926.

There were fifteen accidental child fatalities in St. Paul during 1924, seven in 1925, and seven in 1926; a splendid record when one considers that this city has a population of 300,000. In 1926 deaths to Kansas City school children numbered fifty-six, while in 1927 they dropped to thirty-two.

From these records it will be seen that a fifty per cent reduction in child fatalities is possible in any city—a result that has astonished even the most enthusiastic proponents of safety education. In addition to this, however, safety brings to the school curriculum subject-matter of real worth from an educational standpoint. Teachers who at first regarded its introduction as a sort of necessary evil have been surprised to find that, far from being dull and negative, it is giving life and color to the old subjects. Since safety as it is taught to-day embraces the whole field of conservation—life, property, natural resources—the possibilities for correlating it with every other subject in the curriculum are practically unlimited.

Study Safety in Transportation

In the schools of Springfield, Mass., last year a group of children in grades four and five made a study of safety in transportation. Near the school a new passenger and freight station was in process of construction and the children watched the work progress with a growing consciousness of its significance to the community. In the beginning the study included only transportation by land; but later it was extended to include water and air transportation.

Just as the children arrived at the point of in-

terest in airplanes as a means of travel, Lindbergh made his epic flight from New York to Paris—certainly a most fortunate circumstance in school events. An exhibit of models was prepared showing progress in transportation from the stage coach and the covered wagon to the modern locomotive, the ocean liner, and the airplane. This project correlated history, nature study, arithmetic, English, the social studies, art, and handwork with safety.

Constructing a Traffic Signal

At the Sigsbee school in Grand Rapids a third-grade class constructed a traffic signal. The children were given definite pieces of work to do; they learned how to square up a board to the desired size; how to locate the holes for the windows and how to saw them out; how to make guide lines for the nails and how to drive them down without bruising the wood. The problem of making the light work automatically was met by rigging up an old phonograph spring motor so that the rotation of its spring drum would make and break an electrical current sent through the apparatus from an electric lamp socket. This traffic signal now hangs in the first floor hallway and directs the children as they go to and from classes and also when they are dismissed after school.

These are a few examples of the way safety is being taught in the modern school. It has introduced subject-matter concerning every-day situations with which the child is familiar and in which he is naturally interested. From these first simple lessons he is led to a clearer understanding of government, and his own definite responsibility for protecting life, health, and property.

The methods of organizing safety education vary according to the size of the community and the local educational system. In St. Louis, for example, one of the first cities to become interested in safety education, demonstration centers were established. These were visited by local teachers and by many out-of-town people and their influence was far reaching. The same method has been adopted by a number of other cities with excellent results.

This method of introducing the work depends for its impetus upon the enthusiasm of a small group. Unless the central school administration, therefore, sponsors and supervises the work there is danger that the original interest will die out or that it will not be incorporated in the school system as a whole. On the other hand, the demonstration school provides a laboratory where

Roller skates should be removed before crossing busy streets.

Third-grade pupils receiving safety instruction, using the traffic signal they constructed.

methods and devices may be tested out and made available to all the schools by action of the superintendent.

Detroit adopted the plan some years ago of a full-time safety supervisor whose responsibility it is to organize the work, develop materials of instruction, act as consultant to the teaching staff, and co-operate with the police, fire, and other city departments. The effectiveness of this plan of organization is proved by the remarkable reduction in child faltalities in Detroit previously mentioned.

Appoint Safety Supervisors

A number of smaller cities, such as Louisville, Ky., have appointed part-time safety supervisors, combining their duties with the supervision of health, physical education, or some other branch of the school work.

The list of cities that have published courses of study in safety education now numbers about thirty-five. State departments of education in Oregon, Georgia, and Connecticut have also published courses and Massachusetts now has one in preparation.

The subject-matter of safety will necessarily be based on the causes and frequency of accidents happening in a given community. A city may have a railroad running through the main thoroughfare; or certain dangerous intersections where accidents happen frequently; or hazardous swimming places; or a generally serious traffic problem. In the South, where open fires are commonly used, the number of fatalities and serious injuries from burns is very high. Northern cities have their own problem of winter sports. The teacher must know the causes of accidents happening to the children in her grade and on the basis of these facts should stress certain hazards. Local accident statistics may be obtained from the police department, the health department, or the coroner's office; and the school authorities should see that this information is made available to all teachers.

For example, the safety education department of the Detroit Public Schools is supplied by the police department with copies of all accident reports in which school children are involved. These in turn are sent by the department to the principals of the schools concerned. Providing data on causes and types of accidents, and seasonal dangers, they serve to show what special kind of instruction is needed and what results are being accomplished by instruction in the school.

The National Safety Council has prepared a form for reporting child accidents that is being

used by a number of school systems. Principals who have made a careful study of the accident situation in their own schools have been astonished at the actual number of injuries and the amount of lost time involved. The monthly accident reports for a school district in northeastern Minnesota, representing 51,450 pupils, shows 103 school days lost in forty-five public accidents; 157¾ days lost in seventy-six home accidents, and 84½ days lost in sixty-nine school accidents; making a total of 345¼ days lost in the month of April, 1928. This is surely a startling figure and one that emphasizes the need for safety instruction.

One of the most popular and effective methods of carrying safety instruction into the school has been the organization of a junior safety council. In most cases this work has been fostered by a community safety council; though in a few instances it has been initiated and supervised by the school department itself. The duties and activities of the junior safety council vary in each city and often in each school, according to the local problems involved. In almost every case the most important activity is the safety patrol that guards the crosswalks near the school and that frequently is on duty on the playground or inside the school building.

The duties of the patrols are, briefly, to guard dangerous intersections (standing on the curb and not in the street); to report impartially violations of the safety rules; to assist younger children at all times; to give stop and go signals to children crossing the street; to see that pupils keep within pedestrian lanes at intersections. In a number of cities accidents to children on their way to and from school have practically been abolished as a result of the activity and alertness of the patrols.

School Buildings Must Be Made Safe

One of the most important features of the safety program is the maintenance of an efficient school plant. In many of the older types of buildings conditions exist that are a menace to the lives of the children; indeed, the fire underwriters estimate that seventy per cent of the structures now used are of the old and unsafe type.

Negligence and failure to fix responsibility have made a veritable fire-trap of a building that was

A lesson in street safety for first-grade pupils.

designed with every regard for the safety and well-being of the children during school hours. A very striking illustration of this was found in a junior high-school building housing some 1,400 pupils. Two of the three exit doors were found chained and padlocked at eleven o'clock in the morning. On inquiring the reason the inspectors were told that these doors were bolted morning and afternoon in order to compel those who came late to enter through the door nearest the front office where they could be properly disciplined. In this same school eighteen other serious fire hazards were found.

In another building, three stories high, three fire escapes were discovered at the rear, each solidly locked. Investigation showed that the keys had been lost five months before and that no effort had been made to secure duplicates. In this instance hundreds of children would have been roasted to death inside a steel barrel type of fire escape. A condition similar to this existed in a school in one of the Midwestern states in which a fire occurred some years ago. The vestibule doors on the first floor were bolted. A jam occurred there; the children became panic stricken and seventy-three pupils and two teachers were burned to death.

Causes of School Fires

Overheated furnaces, leaky gas pipes, ignition of waste paper, and spontaneous combustion among supplies and accumulations of rags, waste, and old materials are some of the most common causes of school fires. A disaster that cost the lives of twenty-one pupils started in the basement of a school where a large supply of combustible material was stored. In one of the most modern buildings of semifire-resistive construction, the storeroom for the chemical laboratory was placed directly under the main entrance to the school, through which the majority of children would have to pass if a fire broke out in the building during the regular school sessions.

A visitor to a school in one of the Southeastern states happened in on a day when the parent-teacher association was having its annual frolic. During this celebration the children were given an opportunity to leave the building by the fire escape—for a penny! The use of this life-saving apparatus was an unusual and thrilling experience, and the youngsters thought it well worth the price.

A "No-Accident" Record in Schools

Just as many groups of employees in industry have proved their ability to work for long periods without a single accident causing death, mutilation, or loss of time from work, so the school, as the result of conscientious effort, can establish a "no-accident" record. Lewis A. DeBlois in a recent article on "Safety Teaching and the Higher Efficiency" emphasizes this point:

"Striking examples (of the so-called no accident records) are to be found in the experience of practically all the more important industries, in both large and small plants and under a wide variety of conditions and hazards. In magnitude they have attained the high level of ten million man-hours. This is the equivalent, let us say, of twenty years' freedom from accidental injury in a school of 400 pupils!

". . . But in the end victory will be achieved, not through advances in the realms of adult life but on the battleground of public-school education. Success will be in sight when teachers of children commence to believe that accident occurrence does not imply fortuity and is not a valid excuse for human frailty and for the happening of the unforseen and inevitable, but is an indication of ignorance and individual inefficiency, a reproach on our advanced civilization, and a spur to higher educational achievement. They must, above all, teach that accidents are man-made and that their prevention is a duty and a high ideal."

A model demonstration of marine safety as practiced by the Coast Guard.

The Fine Art of Rating Teachers

Until personal convictions of the scorers can be eliminated, there will be difference of opinion regarding the qualifications and accomplishments of those being scored

By M. V. O'SHEA, Professor of Education, University of Wisconsin

THE QUESTION of rating teachers with the aid of a score card was under discussion. The results of an attempt to rate the teachers in a particular high school were in hand. The score card had been used by the superintendent of schools in the city in which the high school was located; also by the principal of the school; by two high-school visitors representing a university that had accredited the school so graduates could enroll without examination; and finally by a professor of education who was studying the practicability of current devices for rating teachers.

These five men had come together to discuss the accuracy of their judgments regarding the efficiency of each teacher in the faculty of the school. The score card presented an outline of all the traits, qualities, characteristics, or abilities that were regarded as of importance in determining a teacher's success in a classroom. Definite numerical value was assigned to each trait or quality or ability, and the values totaled 1000 for perfection. If a teacher attained a total score of only 750, she would be regarded as "fair," if only 500, as "poor," and if less than 500, she would be rated as a "failure." The author of the card proceeded on the supposition that anyone who might use it in rating a teacher would be able to determine the degree of excellence that she had attained in respect to each of the points upon which she was scored.

Difference of Opinion

The correlations were calculated between the ratings given by the scorers on each element in the score card. They were fairly high in respect to points concerning scholarship but were insignificant on all other points. There was, in fact, so little agreement among the different ratings that the group of five scorers took up each point and each man explained on what basis he made his rating. The first difficulty was encountered in making it clear how the value of a particular point was determined. One of the large points concerned "personality" and there were several elements under this topic that had to be judged separately. One of the elements was "vivacity." In the discussion of this element it was discovered that each scorer had in mind a standard of his own by which he judged whether a teacher ranked high, medium, or low in "vivacity." Two of the scorers maintained that calmness, quietude, and repose were more effective in a classroom than much liveliness or alertness. Three of the men said that a teacher could not arouse pupils unless she stimulated them by an energetic and sprightly manner, both in her method of conducting the class and in her bearing. The two scorers who esteemed calmness more highly than liveliness held that a very active teacher would dominate a classroom and would not give pupils an opportunity to play a role.

Scoring Practically Subjective

It was apparent that each scorer was judging teachers on the basis of what he thought was desirable in respect to "vivacity" rather than what was actually exhibited by those whom he scored. It was further apparent that "vivacity" is such an intangible term that nobody knows, at least no one in this group of scorers knew, what the norm in regard to "vivacity" should be. And so the value set down by each scorer in judging teachers was almost completely subjective.

Another element in the score card that counted rather heavily was "neatness in dress and appearance." When the group of five scorers discussed this factor, it was found that the standard in judging "neatness" varied with each scorer's personal feeling about the matter. One of the scorers maintained hotly that a teacher should dress in accord with prevailing fashion. When asked whether he would approve of a teacher who used cosmetics (other traits being satisfactory), he said unhesitatingly that he would. Three of the remaining four men hardly knew whether a teacher should or should not be permitted to use cosmetics, while the fourth man was certain that she ought not to use rouge or any other device to improve her natural gifts.

One of the five scorers insisted that the stand-

ard of "neatness in dress" should be a conservative one. Anything in a teacher's dress or appearance hinting at extreme fashion should be ground for low scoring. One of the five men held exactly the opposite view. The other three hardly knew where they stood in respect to the question at issue. The conservative man contended that a teacher would be a bad example to her pupils if she adopted the fashions of the day, while the lenient man held that a teacher wouldn't have any influence with pupils if she were out of date in dress or in current methods of beautifying herself.

No Agreement Reached

And so the discussion of "neatness in dress and appearance" of women ended in complete disagreement as to the standard or norm that should be observed in assigning a value to this element in scoring a woman teacher. When it came to the scoring of men teachers in respect to the element, "neatness in dress and appearance," there was a little greater unanimity of opinion, but there was still some disagreement respecting the proper standard to be kept in view in putting down a score for any individual.

Should a man be up to the minute in all details of his dress, or should he be "conservative," as one of the scorers maintained? Should he be permitted to wear anything "loud" or should every article of dress be subdued and inconspicuous? Would it be preferable for him to wear dark clothes or should there be some color in his attire? Should he be scored down if he were negligent in respect to any item of dress, as, for instance, if his shoes had not recently been shined? If the suit he wore were not recently pressed, would that be an evidence of neglect and shabbiness that should be noted in the score assigned to him? Suppose he were fastidious in dress; should he be given a high or a low score for this trait? What is fastidiousness? How shabby must one be in order to be charged with shabbiness?

One of the scorers pointed out that in the university with which he is connected some of the instructors deliberately cultivate a rather shabby appearance and this seems to add to their popularity with students. It conveys the impression that these men care nothing about externals but give their attention wholly to things of greater importance. On the other hand, some of the instructors cultivate fastidiousness and even eccentricity in dress, and this seems to make them popular with students, for it suggests that they do not run with the crowd, that they are independent and individualistic and so are to be followed more readily than the initiative, docile, herdlike members of the faculty. It was pointed out that the president of the university referred to is always well-dressed, observing the fashions of the day, and this characteristic appears to add to his other strong qualities so that students readily follow wherever he leads. So the discussion of this element in the score card left the scorers with the conviction that it was an elusive and intangible element to deal with in scoring a teacher.

Another element in the score card under the topic of "personality" was "posture." Presumably, a teacher should sit or stand erect and present to pupils an aspect of energy, of decision, of seriousness, of commanding ability. If he should bend over his desk or have his hands in his pockets or lean one elbow on the table, he should be scored zero. One of the scorers insisted upon this as a proper basis for evaluating "posture," but two of the scorers were certain that this was wrong, or at least that there were occasions when a teacher might be quite informal in his posture and have a better effect on his pupils than if he were more rigid or conventional.

Informality Secures Good Response

A concrete case concerning one of the teachers who was scored was cited. She sat at her desk, on the edge of the chair, fumbling with her watch during the entire class period. This would be called a very informal posture. This was her habit. One of the scorers marked her very low in "posture," while two of them marked her very high. They said that her composure and her informality resulted in putting her pupils at their ease and in developing a friendly atmosphere in the classroom so that they expressed themselves readily and cordially. If she had been more formal she would not have secured as good a response from them. This teacher's comfortable posture and her friendliness before her class conveyed the impression to her pupils that she had command of the situation; that she was confident that they would conduct themselves becomingly; that she had no worry about the outcome of the recitation. If she had been more constrained in her manner, her constraint might have become contagious and her pupils might have gained the notion that she had some fear that the recitation would not turn out well.

And so with the scoring of every element in the score card relating to personal appearance or personality traits; there was wide divergence in the judgments of the five scorers regarding the value that should be assigned to any element in rating any one of the teachers. In the discussions it became apparent that a given trait—in-

formality in posture before a class, for instance—might be advantageous in one teacher, but be a handicap in another. It would depend on other traits whether it would affect pupils beneficially or otherwise. In the same way, fastidiousness in dress might turn pupils against one teacher but incline them toward another teacher. No single personality trait taken alone, can be said to be always favorable or always unfavorable in the classroom; it must be considered in connection with the total personality of a teacher.

The correlation between the ratings of the five scorers in respect to the scholarship of the teachers scored was higher than in respect to personality characteristics, and yet there was not complete agreement by any means. If a teacher made a grammatical or historical or mathematical mistake in conducting a class, all the scorers agreed that it should be taken into account in rating the teacher; but when it came to scoring a teacher's understanding of the meaning of what was being taught and its bearing upon situations in present-day life, the scorers differed widely in their judgments of any particular teacher's merit. Three of the scorers held that accuracy was the essential requisite in scholarship, while the other two maintained that fullness of knowledge with insight into the applications of what is being taught to present-day life was more important than technical accuracy, though they did not ignore the latter factor in scholarship. Even after a good deal of discussion, each scorer stood his ground, so that when the debate closed there was lack of unanimity of opinion regarding standards or forms for recording scholarship.

Agree on Knowledge

The nearest the scorers came to complete agreement on this point was when the question of range of knowledge came up for consideration. The scorers all thought that the teacher should know more about the subject being taught than was included in the text which was being used, but the moment the question of what should be the character of this additional knowledge, whether it should be mastery of technical material or an understanding of the bearing of what was taught upon human progress and well-being arose, there was division among the scorers.

Using the score card, each scorer assigned a value to each element under the heading, "scholarship," on the basis of his bias respecting the essential quality of scholarly attainment. Even in scoring teachers who were conducting classes in algebra, prejudice played a role. One scorer who thought that everything that high-school pupils learned in a class should be applied in some way to real situations in daily life scored a teacher's scholarship on this basis, while other scorers paid no attention to the extent to which what was learned was applied to practical problems. So in the case of "scholarship," as well as in the case of "personality traits," it was apparent that the situations were most complex, and that there were no absolute standards or norms by which to measure accurately a teacher's attainments or efficiency.

Judge by Results

One of the teachers in the high school mentioned at the outset of this article was what might be called a rough-and-ready fellow. He had been known to take off his coat while teaching a class. He was a teacher of physical geography. He had gone out on excursions frequently with his class and he was quite informal in his attitude toward pupils on these trips. He brought some of his informality into the classroom. Two of the scorers penalized him for his lack of observation of conventions, but three of them gave him the highest score permitted on the score card. They liked his companionable relation with his pupils. They agreed that he was not very conventionalized, but they thought his pupils liked him all the better and worked more dynamically for him than they would have done if he had been more formal and conventional. These three scorers said that he should be judged by the outcome of his methods and not by formal rules of classroom procedure.

The scorers differed in their estimate of the efficiency of the methods of the various teachers whom they scored. One of the scorers marked several teachers quite low because they asked questions that could be answered by "yes" or "no." When it was brought out in the discussion that they followed these questions with others requiring explanation from pupils, the scorer still argued that it was never permissible to put a question to a class that could be answered by a "yes" or a "no." The scorers split on this point as they had split on the other points involved in the use of the score card, and the debate closed on scoring methods of teaching without agreement among the scorers, except in respect to two or three of the less important elements on the card.

The time may come when we will be able to measure the force of every personality trait, every aspect of scholarship, and every detail of teaching technique so that we can go into a classroom and assign a definite value to every factor that plays any role whatever in a teacher's efficiency. But we are probably quite far away from

this desired goal. In the meantime, would it not be most effective to rate teachers on the basis of the outcome of their work in the attitude of their pupils and in their growth in knowledge? Of course, it may be that we cannot judge any more accurately of the response of pupils to teaching than we can judge of the influence of any personality trait or any particular method of instruction upon the intellectual and emotional reactions of pupils. But it does appear that we can determine a little more accurately whether pupils are profiting by instruction in a given classroom than we can determine in abstracts just what value to assign to any element in a teacher's personality or even her scholarship or her methods of instruction. Is it not possible to tell whether pupils are making headway in the mastery of a given subject and whether they have a wholesome attitude toward their teacher and their work?

Factors in an Educational Survey

Several important factors must inevitably be considered in introducing a survey of an educational institution—the field or fields of the institutions, financial support, and methods of organization and administration. The ramifications of these factors are numerous and varied. In the study of institutions it is necessary to take into account their geographical, social, and economic setting; their relations to each other and to other parts of the educational system; their control; their internal organization; their standards of scholarship; the training, experience, loads, and salaries of their teaching staffs; their buildings, libraries, equipment; and their present financial condition, and their future needs.

Centering Attention on Details

If attention is centered upon details, the surveys reveal a considerable degree of standardized inquiry and provide an important body of information upon a wide range of the subjects with which administrative officers are concerned, such as degrees held by the various ranks of the staff, teaching schedules and loads, enrollments in different curricula, size of classes, fees, salaries, and institutional support. These are matters of survey routine and may or may not be related to the larger problems with which outside surveys are best fitted to deal. Many of these subjects should be and are becoming increasingly matter of current institutional record and interpretation.

The surveys of higher education devote a surprisingly small amount of space to discussion of the geographical, social, and economic background of the colleges and universities studied. Information of this kind is frequently given without comment, but careful presentation of these conditions frequently determines analysis of the scope and nature of institutional offerings, or support and of fields of service. Special attention to such relationship is worthy of consideration, therefore.

Maintaining School Yards

"Arbor Day has been a calamity at numerous schools as the trees have been planted in such places as to prevent any proper use of grounds. I am a great admirer of trees, but I do not care for a tree in the middle of a baseball diamond or a tennis court.

"After the ground has been leveled, if it is soggy and more or less low, lines of tile should be run through at distances of about sixteen feet from each other. If the ground is sandy or loamy and high, this drainage may not be required. If the ground is small and used by many children, it is usually necessary to surface a part of it, or to plant wear-resisting grass.

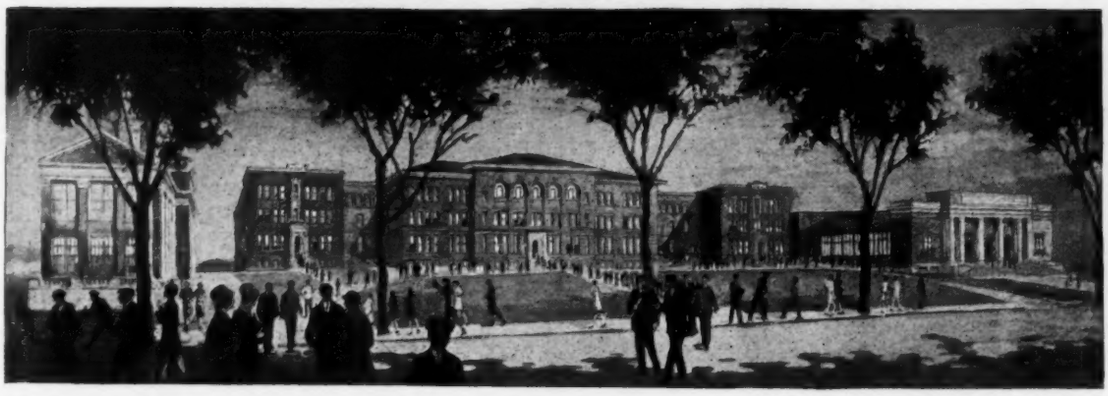
"In the southern part of Missouri, and in most of the states farther south, if Bermuda grass can be once started it will stand the most strenuous use. It has an underground stem and sprouts up from every joint. I have seen high schools with small grounds that still maintain this grass although used yearly all the time. Next to Bermuda, and in places where Bermuda will not grow, June grass or blue grass is probably best.

"Many of the old city schools have brick yards. Brick is very hard to run on, wears out balls and other equipment rapidly, and is very slippery in frosty weather. Concrete is better than brick, but is still very unsatisfactory. It is tiring to run upon, and a fall upon it is apt to mean a serious hurt.

"In some places a surface is manufactured by mixing sand, ashes, and clay in a concrete mixer. This gives a fairly satisfactory surface where the ground is high; but the surfaces most commonly used are torpedo gravel, a fine water-washed gravel about one-eighth of an inch in diameter, chat, or lime-stone screenings.

"Limestone screenings are better than chat for the reason that they stick together and do not pick up on the feet to be carried into the school building. Recently some of the schools have been using rock asphalt crushed and screened; but it is yet too early to know whether or not this is going to prove satisfactory."—*Dr. Henry S. Curtis, director of hygiene and physical education, University of Missouri.*

Creating a Modern High School in an Old Building



The new Somerville High School, Somerville, Mass., is rising like a phoenix on the historical site of the obsolete, present school building

BY JOHN RITCHIE, BOSTON

THERE was a period of some years during the World War and immediately following it, when matters of civic importance gave way to the exigencies of war, and there has been a rather slow recovery toward normal conditions since that time. One civic activity that was quite disturbed was the furnishing of schoolhouses for the growing population. Since, in a progressive community, the school population doubles in from seven to ten years, it was natural that the facilities for the education of the children lagged behind the needs. Temporary expedients, such as doubled or tripled service in the same building, the use of temporary school buildings, or the placing of classes in dwelling houses, have in a measure tided over the emergencies.

Great Construction Activity

Within the past two or three years, therefore, with the realization of the deficiencies, and the spirit to remedy them, there has been great activity in schoolhouse construction throughout the country. Much of this has been in the form of new school buildings, and again, there has been a great deal of energy devoted to the readjusting of older structures to the existing requirements.

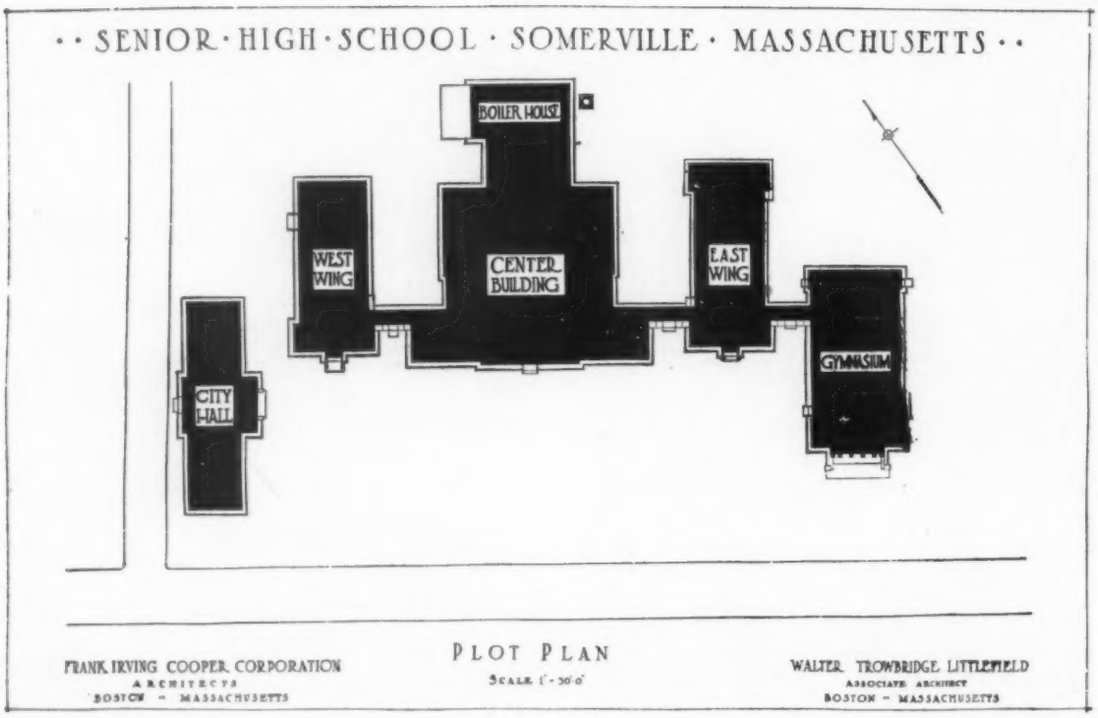
In Connecticut, the city of Hartford has made remarkable efforts to regain lost ground in the recent erection of two high schools at a cost of $1,500,000 and $1,800,000 respectively, the latter of which, the Morgan Gardner Bulkeley High School, has been described in The NATION'S SCHOOLS.[1] In Massachusetts, the city of Somerville has undertaken a remarkable work in the readjustment of its high school to existing needs at a cost of $1,250,000.

A Municipal Unit

Somerville, a city of hills, began long ago the building of an important municipal unit, an idea that has since been quite popular among progressive cities with vision. There were clustered on the ridge of Central Hill, the city hall, the public library, and the original high school, the last building dating back some fifty-six years. As civic needs demanded, the city hall was renovated and the public library was housed in a commodious structure to the east along the ridge, with a memorial park placed between the old and new library sites.

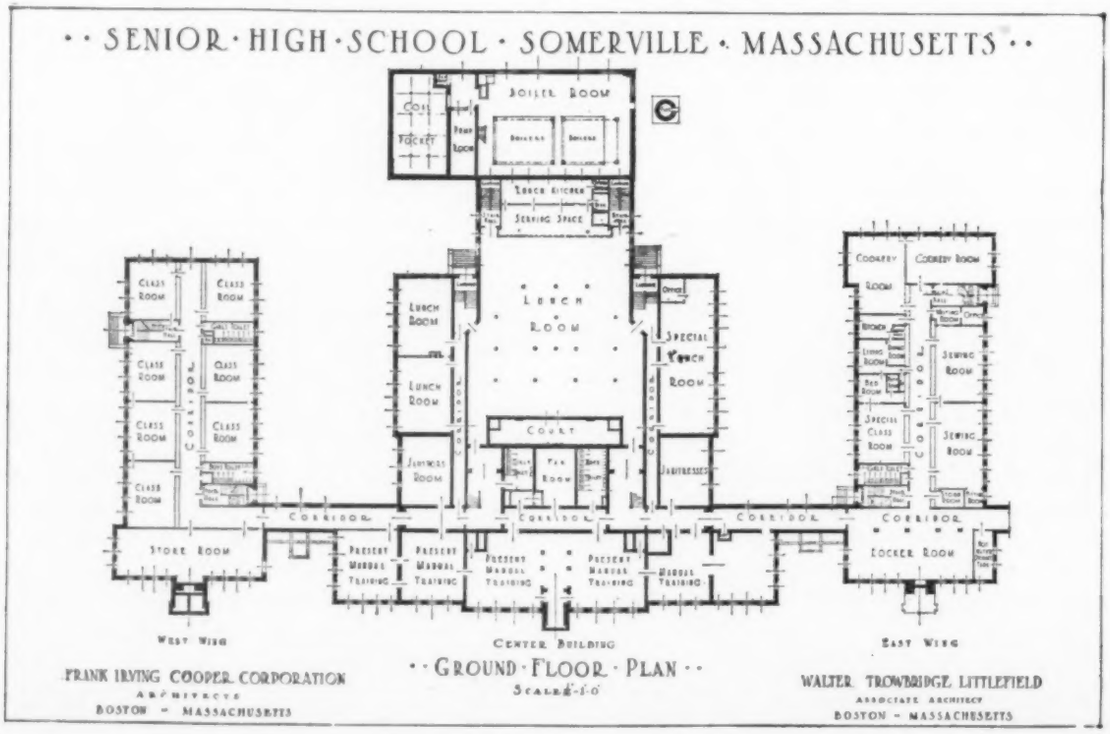
About thirty years ago, the city requirements in the way of high-school accommodations were met by the building of a main high-school structure to the west of the old school, which was subsequently devoted to classical studies and be-

[1] Vol. 1, No. 2, February, 1928, p 19.



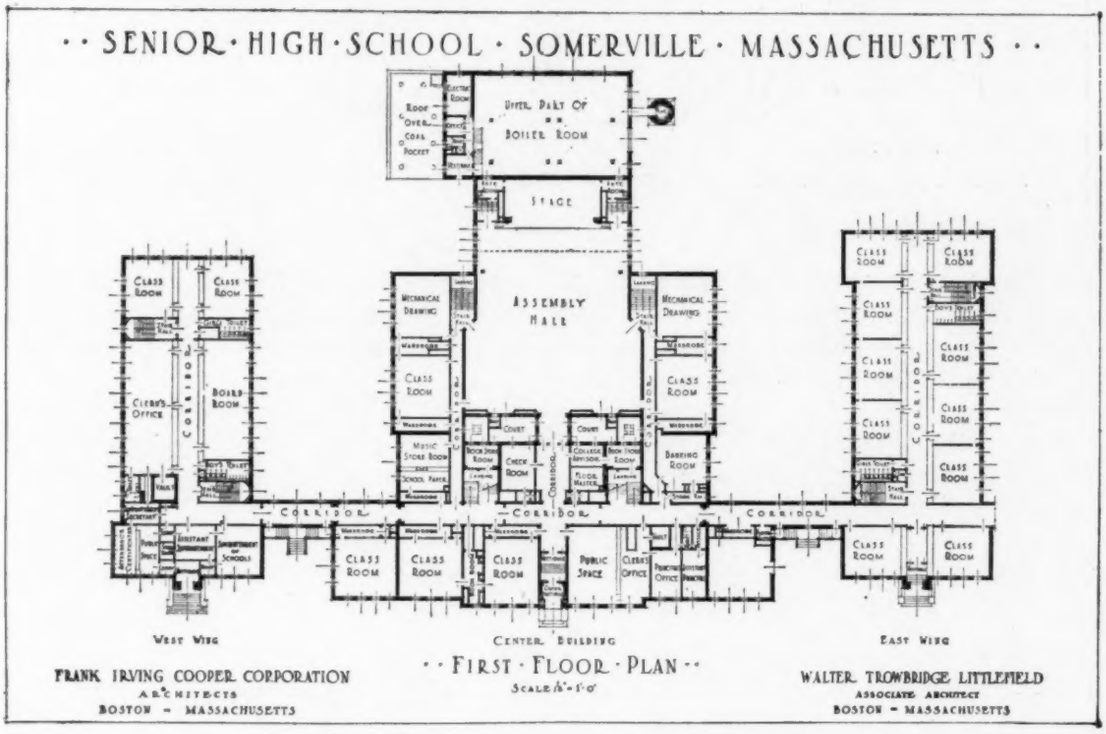
came the Latin school. The old library building, between these newer constructions and the city hall, was then given over to offices and the administration of the schools of the city, with quarters available for the G. A. R. and other organizations of citizens.

During intervening years various improvements have been accomplished, but the city officials decided last year that radical changes must be made, looking to greater accommodations, and selected the Frank Irving Cooper Corporation as architects. Plans have been drawn and accepted, and work is under way, which is so planned that the desired objectives may be attained without interference with the functioning of the existing high school. This is the more interesting since it involves much work of alteration and reconstruction in the center building, in order that it be completed in time for the opening of the school in September. Included in the project is the con-



struction of a west wing; the removal and rebuilding of the original high school, which will become the east wing; the building of a gymnasium; and the installation of a new heating plant, which will care not only for the school building, but for the city hall and the public library.

It is of greatest interest to realize that the citizens of Somerville appreciate the beauties and advantages of their high-school site, and seek to have their greater high school in the same inspiring place. Few schoolhouse locations in the country can compare with it in point of scenic beauty, historical associations, and inspiration.



The pupil at the Somerville High School has unusual advantages.

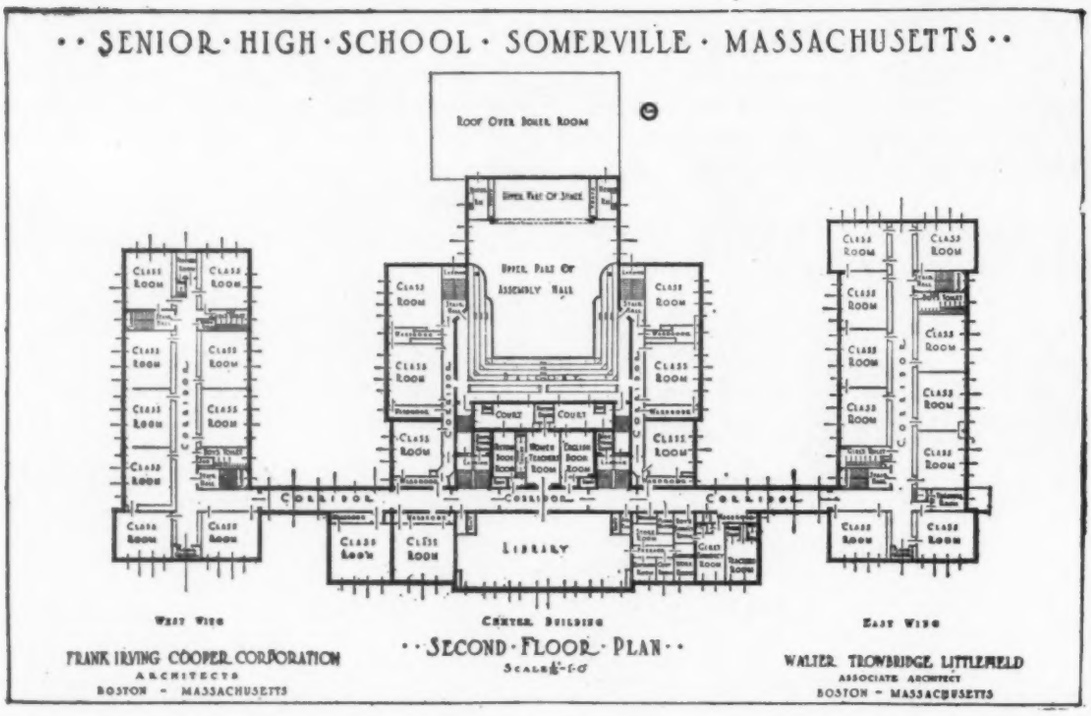
Central Hill, on the crest of which the municipal activities cluster, has a sharp descent to the north into the valley of the Mystic river, with the outer hills of the Boston Basin bounding the view to the north and northwest; Charlestown lies close at hand to the northeast, with Boston, dominated by the gilded dome of the State House, to the east.

It is a country rich in historical associations. Breed's Hill, where the battle of Bunker Hill was fought, lies just below, and through the roads at the foot of Central Hill Paul Revere made his way that memorable April night to waken the farmers of Lexington and Concord. On the banks of the Mystic river was the modest yard in which the pioneer of this country's memorable work in ship building was built. Glaciated summits and ridges of New England's granite foundation, peering through cultivated forests, tell a geological story with its modern environment of the cared-for woods of public parks and reservations.

To the south one may view the domes and towers of Cambridge, betokening the devotion of that city to higher education, and farther away, the mass of busy Boston. These are among the associations that the pupil on Central Hill has for daily inspiration. Truly, the city has been wise to concentrate its high-school construction in so favorable a spot.

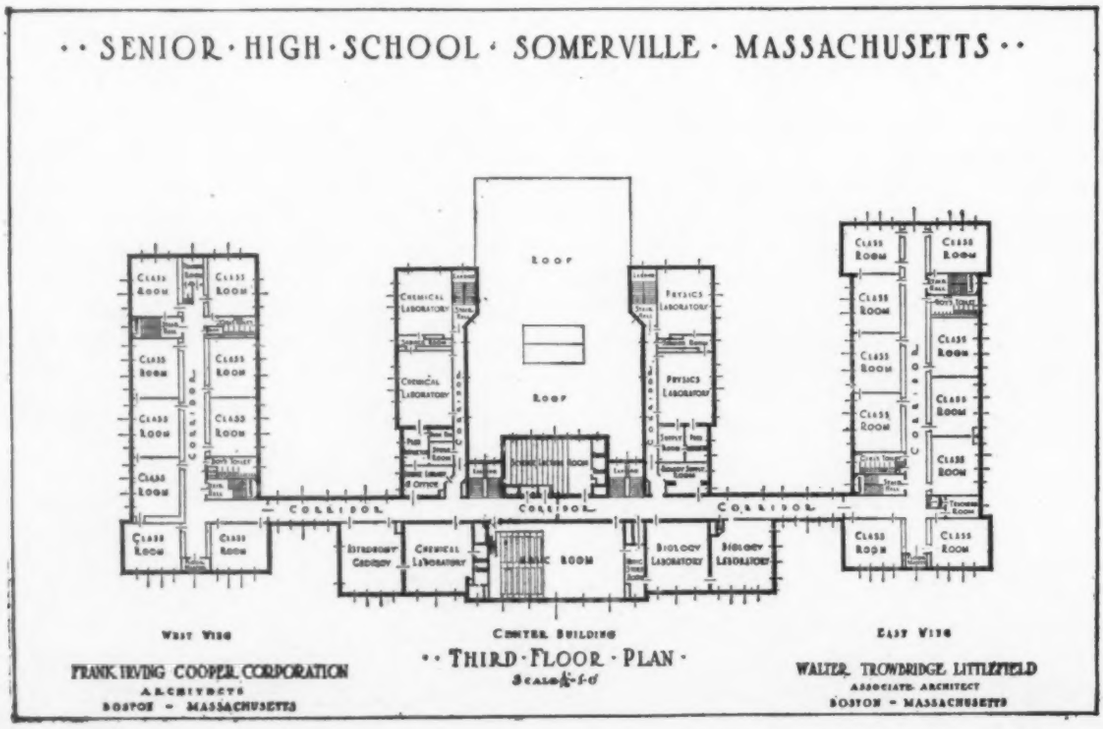
Somerville has much of interest to the educational world. Here and there throughout the country there is a school district in which the school management has attracted the attention of educators. In Somerville, the superintendent of schools, Charles S. Clark, just now retiring after a lifetime of practical service in his profession, has earned universal praise for his management, and the principal of the Somerville High School, John A. Avery, has been most successful in maintaining excellent service in structures inadequate to the real needs for a considerable number of years.

As the Somerville High School presented itself before the improvements and additions were begun, there was a central building, the Latin school to the east of it, and the old public library, now an office building, to the west. The plans demanded the immediate construction of a west wing, replacing the office building and occupying the land back of it. When this is ready for serv-



ice, the pupils who have been cared for in the old Latin school will be moved to the new wing, the Latin school will be wrecked and a new building, the east wing, will be constructed on the site. Meanwhile the construction of the gymnasium, to the east of all existing buildings, has been under way and it will be completed and ready for use when the fall session of school opens. It meets one of the greatest needs of the school program; namely, a suitable place in which the exercise and training called for in the school program may be effectively and efficiently presented to the pupils. Up to the present time the aisles in active rooms have been utilized for physical training.

The new gymnasium, now roofed in, is an attractive building in brick and stone, 170 by eighty-six feet. The principal floor is above street level, affording the opportunity below it for a ground floor of sufficient height to insure good illumination and working conditions. The approach to the main floor rises to a pillared portico, within which is a spacious vestibule, fur-

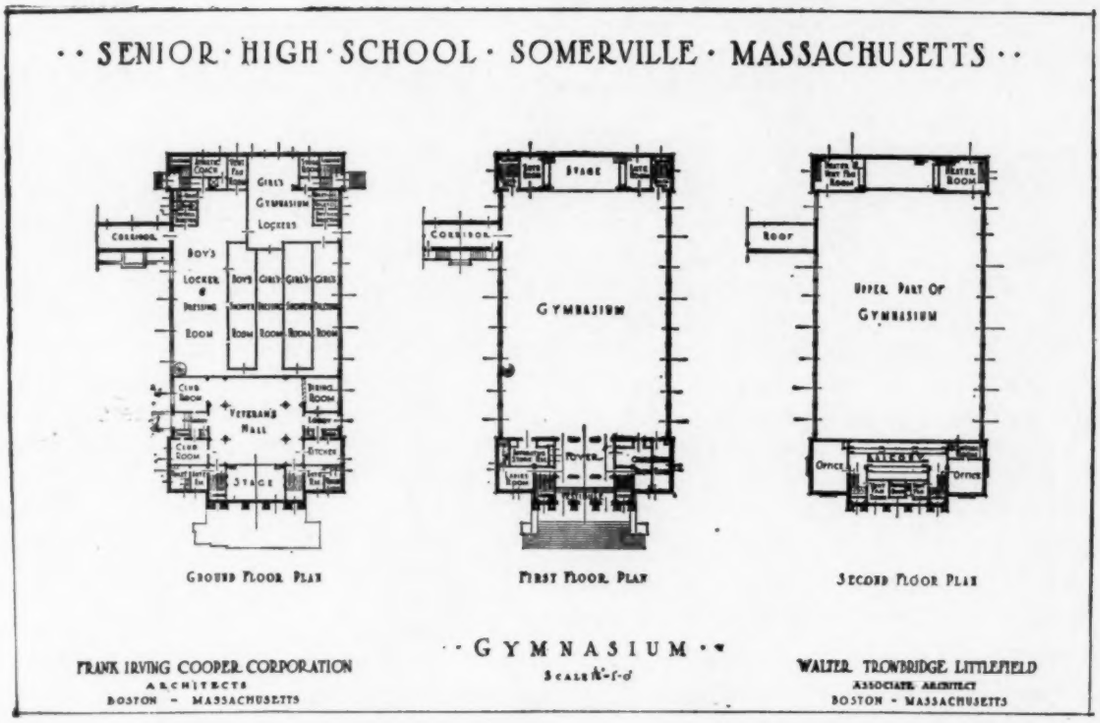


nished with utility rooms that will make it convenient for community use when not required for school exercises.

The floor of the gymnasium measures 135 by eighty-four feet, having a stage at one end and the accompanying anterooms. Stairways lead to the balcony and the ground floor, giving direct means of egress. On the second floor are seats for spectators, an approved motion picture booth, and administrative offices. On the ground floor are offices for both boys' and girls' physical directors and the athletic coach, and lockers, showers, and dressing rooms for boys and girls.

It should be realized that the establishment of terrain, will be entirely above the ground level along one side, making the building in effect a four-story structure.

On the street floor of the west wing will be placed the offices of the superintendent of schools, who, with his staff, will be directly accessible to the public without interference with school exercises or contact with pupils. At the rear of this wing will be a classroom section with rooms placed on both sides of an axial corridor. This corridor is a continuation of the one in the administrative section, so that this very direct means of egress will be available to the pupils and teachers in case of an emergency. There are a



the gymnasium in a separate building has its economic advantage. Evening use of the building does not imply the necessity of lighting and heating the other units of the school, while the confusion that must necessarily arise from the exercises or the gathering of a daytime audience will not disturb the pupils in the academic sections of the building. Further than this, some economies are effected in the cost of construction, since the materials and treatment for the great open spaces of the gymnasium are different from those necessary for the closer work of the classrooms of the academic units, and each kind of construction may be attacked independent of the other.

The west wing, the other new building on which construction is now under way, is a structure 150 by seventy-five feet, with three stories and a ground floor, which, because of the sloping

number of exits from this wing. First, there is the axial corridor leading directly out from the first floor through the administrative section, while there is also a passageway connecting this corridor with the main building. These connecting passageways are on every floor and run from the east wing through the central building to the west wing, and on the ground and first floors continue on to the gymnasium. In addition, in the east wing, and for that matter, in the west wing, the stairways are against the outer walls and their doorways at grade level open out-doors.

The classroom section on the first floor of the east wing includes nine classrooms and toilets for both girls and boys. On the second and third floors this arrangement is repeated with the addition of a retiring room for teachers on each floor. On the ground floor there are two large rooms for work in cooking, and two rooms for

instruction in sewing, these being supplemented by a furnished "home suite," in which the girls are taught the essentials of home care and housekeeping.

In the central building of the school important changes, to be completed by September, that will place it among the most up-to-date in point of special features are underway. For the first time the school will have a library commensurate with its needs and with a full recognition of the important place that the library has assumed in modern education. The school program has a library course, while work in history, commerce, and industry requires collateral reading that only a properly equipped library can supply. The necessary books and other material have been available for some time but adequate library facilities were lacking. This handicap will be nullified with the establishment of the new library hall on the second floor of the central building.

Also, music will be provided with adequate facilities for the first time. Previously, the study of music was carried on in any available study or classroom, none of which had any adaptation for musical work. The new music room will be located on the third floor of the central building, in a hall acoustically perfect, while sound-proof walls will prevent the disturbing of adjacent classes. For the further appreciation of music, the auditorium and great hall of the gymnasium will be provided with reproducing horns, allowing large audiences to listen to music, as well as lectures or addresses.

Rearrangement Allows Special Rooms

The added space in the newer constructions will withdraw from the central building a large number of general study and classrooms and will permit the bringing together of special studies in this building. On the third floor, in addition to the music room, there will be laboratories for physics, chemistry, and biology, and study rooms for geology, astronomy, and other sciences, with two large, well-equipped lecture rooms. On the second floor, in addition to the library and its accessory rooms, there will be eight classrooms, utility rooms, teachers' retiring rooms, and the balcony of the auditorium. On the first floor there will be two mechanical drawing rooms, four classrooms, storage and utility rooms, a section for commercial studies, offices for the administration of the school, and the main floor of the auditorium with a seating capacity of 1,800.

The ground floor will be remodeled into a large cafeteria with the serving space, kitchen, and accessory dining rooms necessary for accommodating a school of this size. This will be available for use in connection with occasions in the auditorium for which refreshments are needed.

Thus, through remodeling and new construction, Somerville is enlarging its old high school, which had a capacity of 1,700 and which, in 1927, was accommodating 2,740 high-school pupils, to care for a future enrollment of 3,500. Thirty years ago, when the existing central building was constructed, newspapers called attention to "Somerville's Folly," and seriously questioned whether the city could ever fill so large a building with high-school pupils. The city built then with a vision of the future; to-day it is again building, and once more with an eye to the future of education it is planning for the years to come.

The Objectives of Vocational Agriculture

According to the officials in the state department of education at Jefferson City, Mo., there are three primary objectives to be attained in the teaching of vocational agriculture in the high schools of the state. These are:

1. To meet in some measure the vocational needs of those pupils in high schools who will be directly engaged in the occupation of farming, or who will engage in a business closely allied to agriculture, or one that is very largely dependent upon it.

2. To supply all pupils with an opportunity to acquire worth while information concerning the great basic industry of agriculture.

3. To develop an appreciation of the problems confronting the farmer and true understanding to bring about a better attitude and a closer relationship between rural and urban people.

To these primary objectives may be added seven important contributing or supplementary aims: (1) To teach people to be able to perceive farm activities that will lead to greater profits; (2) to give an acquaintance with a large number of facts concerning the great industry of farming; (3) to train for agricultural leadership in the community; (4) to give special attention to all knowledge that will lead to better contentment on the farm; (5) to teach the co-ordination of school activities and the farm enterprises of the community; (6) to develop the vocational aspect that makes the boys who remain on the farm better farmers; and (7) to teach pupils to appreciate better kept farms.

All pupils of vocational agriculture participating in the foregoing objectives are required to carry on at least six months' directed or supervised practice in agriculture as an integral part of the work.

Is the University Interested in Education?

The functions of such a school being to discover, conserve, and disseminate truth, it might seem that research was being stressed to the detriment of education

By P. W. HORN, President, Texas Technological College, Lubbock, Texas

"EVERY university exists to carry on three primary functions: To conserve the heritage of truth already discovered; to discover new truth; and to disseminate truth among men within and without its walls."

The above statement of the functions of a university is given by Dr. E. A. Alderman, President of the University of Virginia. The mere statement of his name is an indication that the utterance is well worth considering. The definition itself sounds like an admirable and comprehensive statement of the functions of a university.

And yet, it must be admitted that the definition is noteworthy, not merely on account of what it includes, but also by reason of what it does not include. For instance, it makes no mention whatever of education. It has nothing to say about citizenship or about character forming, or about adaptability to environment, or the development of the individual. In fact, this statement leads us to infer quite definitely that the university is interested primarily with truth and is interested secondarily, if at all, with men.

It causes me to think of an experience I once had when delivering some lectures on the subject of education in the summer school of one of the great universities of our country.

"We Are Not Interested in Education"

I wished the students in my classes to refer to certain books on the subject of education. When I sent them to the library for these books, they returned with the statement that the books mentioned were not in the library. I sent them back with the statement that the books were used in regular courses given in the summer school and that consequently they ought to be in the library. The students came back with a message from the librarian as follows:

"Those books are on the subject of education. This is a university. We are not interested in education."

The remark impressed me as rather a striking one. I have repeated it in public lectures several times and it has generally been greeted with a ripple of laughter. What the librarian had in mind was evidently education in the narrow and technical sense of the term. She referred to what is sometimes designated as pedagogy. Dr. Alderman, on the other hand, suggests in his definition the broader and popular use of the term education. His definition would suggest that the university is not interested in education even in the ordinarily accepted sense of the word—because the university is interested in truth rather than in men.

Is the Interest Secondary or Primary?

As a matter of fact, *is* the university interested in education? And if so, is its interest in education primary or only secondary?

Dr. Alderman's definition possesses the merit of great clearness—a merit not always to be found in definitions made by educators or by others. He points out very clearly that the university is interested in doing three things.

First, its duty is "to discover new truth." This work is sometimes referred to as "research," and is known at least by name to most college and university professors. It has done a most excellent service in extending the bounds of human knowledge. I fear that at times it has also served as an alibi for a large amount of poor teaching. It is undoubtedly one of the true functions of a university. Nevertheless, research is by no means identical with education.

Next, there is the duty "to conserve the heritage of truth already discovered." This could probably be translated roughly into the vocabulary of the university man by the term "publication." It is necessary for the university to place in permanent form a record of truths discovered. This involves the making of textbooks and other books and the preparation and publication of papers on a variety of subjects as wide as truth itself. To record truth is to render a serv-

ice to society. Nevertheless, the making of such records is not in itself directly educational. It may provide the tools for education, such as can be used advantageously in the hands of a real teacher.

The third function enunciated in the definition is "to disseminate truth among men within and without its walls." This touches upon the work of teaching—perhaps. If the mere dissemination or impartation of truth is the work of the teacher, and if the receiving of such truth constitutes real education, then this third function of the university may be considered as bearing upon education.

Fact Transference Is Not Teaching

However, there is in the minds of a great many men a belief that true teaching is more than the mere impartation of knowledge. Young teachers are constantly being cautioned against the idea that the mere transference of fact is teaching. Such impartation or dissemination seems to resemble the process of instruction far more than it resembles that of teaching. There is an axiom among teachers to the effect that "unless something has been learned, nothing has been taught." The process of learning is being constantly presented as an active, not a passive affair. The teacher in the elementary school is constantly being cautioned to remember that she is not teaching arithmetic and geography and grammar, but is in reality teaching boys and girls. The teacher in the college is urged to remember that he is not teaching biology or Spanish or mathematics or chemistry, but is teaching young men and young women. It would be a reasonable inference from the definition of Dr. Alderman that the university is not primarily interested in teaching men and women, but is primarily interested in the teaching of truth as such.

What Is Truth?

An acceptance of this idea would, of course, call for a definition of the term truth. It would bring up the half jesting inquiry of Pilate, "What is truth?" If what the university man has in mind is merely fact, then undoubtedly the world would reject his idea. The mere reception of facts never made any man an educated man. A great mass of facts may make one a learned man, but it cannot possibly make him a man of real education.

But, of course, it must be recognized that there is a distinction between a fact and a truth. The multiplication table is a collection of valuable and well authenticated facts. It is doubtful, however, if the multiplication table could possibly be described as a truth or collection of truths. The whole science of mathematics is a collection of a certain type of facts; but it is doubtful if it could be correctly described as the science of truth. The parable of the prodigal son, on the other hand, is probably not a fact at all; but it contains a tremendous amount of truth. As a truth, it probably affects the life of the world to-day a thousand times as much as does the undoubted fact that at a certain time and in a certain place a man called Brutus assassinated another man known as Julius Caesar.

It was undoubtedly in some such sense as this that the Great Teacher stated that "ye shall know the truth, and the truth shall make you free." The important words in the first half of this statement are the words *know* and *truth*. The Great Teacher was perfectly clear in pointing out the fact that there is a great deal of difference between merely possessing fact, or even possessing truth, and putting it into practice. His emphasis was always not upon the truth received, but upon the truth acted upon. His commendation was for him that "heareth my words and *doeth* them."

Research Found in Varying Degrees

It must be kept in mind that, after all, the work of research, of publication, and of teaching are to be found in varying degrees in all institutions that are in any manner educational. The teacher in the first grade may and should and sometimes does discover new facts in regard to the child's mind and the best processes of teaching. This is in itself a matter of research. In some instances she embodies her discovery in a publication, thereby helping "to conserve the heritage of truth already discovered." Nevertheless, such work on the part of the first-grade teacher is merely incidental. She is fully aware of the fact that her great work is that of teaching. It may perhaps be roughly estimated that the function of the first-grade teacher consists in research and publication to the extent of one per cent, and that ninety-nine per cent of her task is that of teaching. In other words, the function of the first-grade teacher is educational to the extent of at least ninety-nine per cent.

As the age and maturity of the pupil develop, he becomes more and more able to fend for himself. Hence, his need for direct help from the teacher becomes less and less. Therefore, the duty of a teacher to do research work gradually increases. It may be roughly estimated that in the case of the college teacher, ten per cent of his work is, and should be, that of research and publication, while the other ninety per cent should be that of teaching.

In the case of the university man, however, the percentage of research and publication apparently

increases very rapidly. If we accept the definition the university president above quoted, it should seem that the university man is interested to the extent of perhaps ninety-nine per cent in research and publication, and is interested in education to the extent of perhaps one per cent. This last percentage mentioned is, of course, a variable; and any mathematician will recall that some variables have the characteristics that they may be made to differ from nothing by less than any assignable quantity.

On the whole, I am very much inclined to believe that President Alderman has given us a correct statement of the three-fold function of the university, properly so-called. His definition applies about equally well to what is known as the graduate school. In fact, the acceptance of his definition may give us a much needed test for distinguishing between the work of the college and that of the university.

The work of the elementary and secondary schools undoubtedly is that of educating boys and girls. The work of the college is that of educating young men and young women along the lines of what is known as higher education. The work of the university is not primarily that of education at all, but is rather that of research and publication. The elementary school, the high school, and the college are primarily interested in education. The university is primarily interested in truth.

How Will It Affect Appropriations?

The making of this distinction may be comparatively easy for people who have been accustomed to thinking along educational lines. It may be wondered, however, just how easy it will be to get this distinction into the minds of people generally. It may specifically be wondered just how easy it will be to get members of state legislatures to understand this distinction and to translate it correctly into terms of appropriations.

For instance, in the very paper in which Dr. Alderman makes this distinction so clearly, an appeal is also made to the state legislature of Virginia for an increase in financial support for the University of Virginia. It is certainly to be hoped that this appeal will meet with success. Nevertheless, it may as well be frankly recognized that the members of the legislature of Virginia are probably interested primarily in the young men and women of that state. They are doubtless deeply interested in education. If the frank statement should be put before them that the university is interested in abstract truth to the extent of ninety-nine per cent, and in the education of the young men and women of the state to the extent of only one per cent, it may be wondered what effect this statement will have upon the appropriation bills.

In fact, if the legislature in any state should come to believe that out of every one hundred dollars appropriated for the support of the state university, ninety-nine dollars will be devoted to research and publication, and only one dollar to the work of educating the young people of the state, it may be wondered as to just how liberal that legislature is likely to be in providing for the support of the state university.

Why the College of Education?

Furthermore, if it be recognized that the university is interested in education to the extent of only one per cent, then it becomes an interesting question as to how it happens that in many universities there is what is known as a college of education. The only answer to this question that occurs to the writer is that the university is interested in the scientific or technical aspect of education, though not primarily in the results to come from it. This may perhaps throw some light on the quality of the product that comes from the study of education in some of our great universities.

You may perhaps have heard the story of the economical farmer who objected to the fact that his hired man carried a lighted lantern with him when he went on a courting expedition, thereby wasting oil. He rebuked the hired man by saying that he himself had done his courting in the dark. "Yes," replied the hired man, "and just see what you got!"

If the universities are much more interested in the discovery of truth than they are in the development of the young men and women for citizenship and for general efficiency, we may properly expect the schools of education, which are component parts of these universities, to distribute their emphasis in somewhat similar fashion.

After all, however, it seems that my friend, the librarian, was at least partially in the wrong. The university is interested in education—to the extent of approximately one per cent.

The number of cities reporting to the Playground and Recreation Association of America that they maintain community-recreation programs under leadership increased from 505 in 1922 to 815 in 1927. During the same period the number of paid leaders reported was nearly doubled. Training institutes for employed leaders were reported for 1927 by 146 cities, and the total expenditures reported by 658 cities for that year amounted to more than $32,000,000.

The Validity of Contracts for Personal Services

A study of recent court decisions on the interpretation of the statutes regarding the soundness of such contracts made by boards of education

By RICHARD B. THIEL, Professor of Education, Lawrence College, Appleton, Wis.

IT IS generally recognized that the school district, whether it constitutes a county, city, township, or component parts of any of the foregoing, is a form of public corporation commonly known as a quasi municipality. Accordingly, its governing body, usually known as a school board or board of trustees, or a board of directors, in order to perform its prescribed functions, is given power by law to make and execute contracts. The school district being one of the lowest forms of public corporations, all powers conferred upon it by statutes must be strictly construed and applied. This constitutes a rule generally followed by the courts in all of our states.

Strict Construction

Since the powers and duties of a board of education are construed so strictly and rigidly it has been found necessary in most states to draft the laws carefully and to enumerate in more or less detail what contracts may be entered into by the board, under what conditions, and the manner or form in which they may be drawn. As these prescriptions are more often held to be mandatory, rather than directory, it becomes necessary for school officers to observe closely the detailed requirements and stipulations of the law applying to their contractual powers. The courts make no general rules but must confine themselves to an accurate interpretation of the statutes as they find them. As many of the laws are not carefully drawn, it often becomes a difficult and somewhat uncertain undertaking to determine what the intent of the legislature may have been.

For this reason school officers should make a careful study of the school laws of their respective states and the court decisions interpreting them. It may be necessary from time to time to ask for rulings by the state superintendent, or commissioner, or the attorney general, or eventually to bring the matter to the attention of the legislature for amendment or revision. Several recent cases call attention to the wide diversity of judicial and legislative opinion that prevails in the states, with regard to the tests of legality, particularly of teachers' contracts and other contracts for personal services. Although these cases show extreme points of view they indicate how necessary it is for school officers to keep informed of practices current in their respective states.

In the fall of 1925, a young woman in South Carolina believed herself to have been engaged to teach a school in Darlington County. Upon reporting for duty she found another young woman established in this particular position; and failing to secure satisfaction from the local school officers she brought suit against L. W. Dick, the county superintendent, seeking to restrain him from having a part in the payment of the rival teacher's salary. This order was denied by the Supreme Court of South Carolina pending determination of her right to possession under her contract.[1]

The Proper Remedy

It is clear that the proper remedy was not in enjoining the payment of her rival's salary but in suing for recovery of salary due her because of denial of opportunity to serve in the capacity of teacher to which she was legally entitled on the basis of her valid contract with the board. Accordingly, Miss Windham then brought suit against the Black Creek School District for the amount due her under her contract.[2]

The defense argued that this so-called contract was not valid as only two of the three directors had met informally and without notice to the third. In upholding the validity of the contract the Supreme Court of South Carolina, in its decision of March 2, 1928, followed the reasoning of a former ruling in the oft-quoted Hughes Case.[3] In this case the judge accepted the charge of the

[1] State ex rel Windham *v.* Dick, Co. Supt. of Schools et all, 131 S. E. 772.
[2] Windham *v.* Black Creek School District No. 9., 141 S. E. 896 (Mar. 2, '28).
[3] Hughes *v.* School District, 44 S. E. 784.

circuit judge (Hon. R. C. Watts, now Chief Justice of the Supreme Court of South Carolina) which is quoted: "The board of trustees have a right to make a contract; they can call a meeting, or they can get together and agree on it. It is not necessary, as I take it, that they should actually designate the time and the place. They can discuss the matter on their farms and if two agree and they elect a teacher, that is sufficient, as I take it, in the eye of the law." Accordingly, Miss Windham was allowed to collect the salary she would have received had she been permitted to teach on her contract, based on the ruling that oral selection and employment of a teacher by two trustees meeting informally and without notice to the third, is sufficient.

Law Is Loosely Worded

This unusual decision would not have been possible in the great majority of our states whose laws are very explicit on contracts entered into by school districts. But the law of South Carolina is loosely worded, as is indicated by the following quotation, from Section 2630, General School Laws; "The Board of Trustees shall also have authority and it shall be their duty; to employ teachers from those having certificates from their County Board of Education, and fix their salaries; and to discharge the same when good and sufficient reasons for so doing present themselves, subject to the supervision of the County Board of Education."

Exception to the decision of the court in the above case was taken by one of the judges in a dissenting opinion in which he pointed out that "while, as stated in the Hughes Case, great informality is permitted in reference to the meetings of school trustees, it is not suggested, even much less declared, that the unvarying rule may be disregarded, that in all representative meetings, directors, committees, trustees, managers, boards, etc., notice to each and every member is required in order to make valid the action of such body." This is the usual rule closely adhered to in administrative law.

In sharp contrast to this decision is the holding of the Supreme Court in a Wisconsin case[4] in which a school district brought suit against the State Industrial Commission, protesting against its award of $1,000 under the terms of the Workmen's Compensation Act, because of the accidental death of August Olson who had been hired to build the schoolhouse fires in school district No. 4, Sigel, Wood Co., Wis. The matter of hiring Olson came up at an informal meeting of the board at which no action was taken and no record made, but it was agreed upon that the clerk of the district might go ahead and hire someone for building the fires at a wage not exceeding twenty cents per day, and Olson had in fact served as "fire-builder" for the school for the greater part of two seasons and his compensation of ten cents per morning had been regularly paid up to the time of the fatal morning when the explosion of gasoline caused burns resulting in his death.

Olson not having any heirs, the Wisconsin Industrial Commission ordered that the award of One Thousand Dollars be paid into the state treasury as provided by law. The school officers appealed from the decision of the Commission and brought suit in the Dane County Circuit Court to have the ruling set aside. The court affirmed the award, so the case was carried into the Supreme Court which decided in favor of the school district.

The contention of the court was that a contract to be binding upon a school district must be drawn as prescribed by law and authorized at a meeting of the board. The only basis on which Olson might have been entitled to the award must rest on the contention that he was in the employ of the district by virtue of an implied contract. In this connection the court pointed out that the facts from which a contract will be implied against a municipal corporation are quite different from those that raise an implication of contract between natural persons. The court cited the general rule that no contract will be implied against a municipality if such implication conflicts with a statute prescribing a mode of contracting by which alone the municipality may bind itself.[5]

The Dissenting Opinion

Two judges, Crownhart and Stevens, dissented, the former having at one time been chairman of the Industrial Commission. In the dissenting opinion it was pointed out that the school board may act officially when all of its members are present and participating in the act even though the meeting may not have been regularly called and no records be made in the minutes. Furthermore, the act of the clerk in hiring Olson was clearly within the direction of the board. In support of this contention they cited the Butler case.[6] In this case the school board employed a teacher to teach the primary grades and later attempted to compel her to teach in the higher grades also.

Upon her refusal to do this without extra compensation, the school board met and discussed the matter informally without taking notes or mak-

[4] School District No. 4 Sigel, Wood Co. *v.* Wisconsin Industrial Commission, 216 N. W. 844.

[5] Appleton Waterworks Co. *v.* City of Appleton, 132 Wis. 563; Sept. 24, 1907.

[6] Butler *v.* Joint School District, 155 Wis. 626; 145 N. W. 180.

ing record, and decided to discharge the teacher unless she complied with their wishes. They instructed the director, or president of the board, to notify the teacher. The teacher refused to comply and accepted the notification of her discharge and subsequently brought suit for damages. Evidence was introduced by the district to show that no attempt had been made to prevent the teacher from performing her part of the contract. It was also urged that the meeting of the board was informal and no minutes were entered. It held, however, that parole evidence could be admitted to prove the contrary sufficient to take to the jury, which had been done. When all of the members of the board are present official action may be taken although the meeting be not formally recorded in the minutes. The court allowed her to collect as damages the wages lost, on the ground that the board had prevented the plaintiff from proceeding with her contract.

Cases Are Similar

The two cases are very similar. In the Olson case it was held that no legal contract was ever established and for that reason no liability could be imposed upon the district. In the Butler case the award was made to the teacher because of the board's interference with her execution of a valid contract. They thereby made themselves liable for damages covering the amount of the salary lost. It might be urged that the board members were personally liable because of this interference but this cannot be held as they acted within their discretionary powers and with justifiable motives. School officers serving in the interests of the public with little or no compensation are not ordinarily responsible for the results of alleged poor judgment.

The law carefully guards the rights of taxpayers and will not hold them for payment of funds not lawfully levied or expended. No municipality under its limited powers is liable for injuries to pupils, nor even to teachers unless the Employers' Liability Act is made to include them. This is becoming increasingly common among the states as applied to teachers and other school employees, but does not ordinarily include pupils. Carefully as the law guards the rights of the public, it guards even more carefully the right of the individual in his relations with administrative bodies in the service of the public. Thus, even though it may handicap the district to be held for damages growing out of the poor discretion used by its public officers, yet this will work less hardship than to have the individual suffer through the violation of his legal rights and privileges.

In the former case, Olson was unfortunate. Because of the nonconformance of the school board with the requirements of the law in matters pertaining to contracts, he never acquired any rights that the courts could defend. For that reason the award of the Industrial Commission could not be levied against the school district. It is probable that the court might have ruled otherwise. No doubt, the South Carolina Court might have done so under similar circumstances, but that is merely a matter of speculation and not material to the discussion. In the Butler case the rights of the teacher under her contract were clearly established and jealously guarded by the courts.

It may be urged that such irregularities as those in the above cases are largely confined to practice in the smaller communities. Yet there are thousands of instances of superintendents "hiring" teachers, as yet without legal qualifications, through undated contract forms signed in blank by board members. It is evident that such acts are ordinarily not legally binding unless subsequently ratified by boards of education at a regularly called meeting. There is no doubt that many of the so-called breaches of contracts or eleventh-hour resignations or reconsiderations might be prevented if greater care were given to the matter of lawful contractual relationships. For this reason there is a growing tendency in the direction of more specific statutory definition and prescription of the contractual powers of boards of education.

Courts Protect Personal Rights

In contracts for personal services, personal rights are usually involved. These rights must be carefully protected and defended by the courts if guarantees of legal rights are to have any meaning before the law. For this reason the prescription of the statutes in regard to those matters should be explicitly followed. In the absence of specific directions, general principles of law almost universally accepted should be followed. In the larger school systems, there is usually a budgetary allowance for counsel, or there is a public officer, such as the city attorney, the state superintendent, or commissioner of education, or the state attorney general whose services are made available to the school district without charge.

Nevertheless, the city superintendent who acts as the executive officer of the board must give the matter careful attention. If the legal opinions of public officers in the employment of the state, or of attorneys employed by the municipality, need to be sought, his duty is to see that proper counsel is had before the school district becomes involved in court matters that are often wasteful of school funds and of the time of school officers.

How to Produce a High-School Play

Coming from a director of experience, these suggestions should prove invaluable to the dramatic coach who is confronted by seemingly insurmountable obstacles

By DOROTHY M. CRANE, Director of Extracurricular Activities, Newport News High School, Newport News, Virginia

THERE are many excellent books dealing with dramatics in the high school, but few of them are simple and practical enough to aid the English teacher who is suddenly called upon to coach the anuual play. Her first task is to gain the co-operation of a group of interested pupils, ususally the dramatic club, who will really work.

Next comes the selection of a play. The group with whom she is to work, the audience, the facilities, and the purpose must be considered. The accompanying list of tested plays may all be procured at seventy-five cents a copy, usually bearing a twenty-five dollar royalty fee. The royalty play is usually of so much higher type and so much more interesting that it pays for itself in increased community support.

In Table I information is given concerning these plays. The name of the play is given; the number of scenes; details of the cast; type of play; and remarks relative to its difficulty of production. In Table II a list of one-act plays is given, including details of the cast, type of play, and facility of production.

Having selected the play, the director must next choose a cast. The dramatic classes of the Newport News High School have developed the following try-out sheet. Each person reads a

The "stage picture" must be interesting at any time the action is stopped.

TABLE I—TESTED PLAYS OF VARIOUS TYPES AND LENGTHS

Usual Royalty—$25.00

Play	*No. of Scenes*	*Cast*	*Type*	*Ease of Production*
Peg O' My Heart	1	Feminine star Small cast	Romantic comedy Very popular	Fairly easy
Daddy Longlegs	4	Feminine star Large cast Small children may be used	Comedy Fourth act weak	Easy except for settings
The Charm School	2	Large cast Extra girls	Comedy Popular	Fairly easy
Come Out of the Kitchen	1-3	Feminine star	Comedy Popular	Easy except for settings
The Hottentot	1-2	Masculine comedian	Farce Very funny	Needs two good boy comedians
Seventeen	2	Masculine star	Comedy Very popular	One fairly difficult set
Capt. Applejack	2	Masculine star Many good parts	Melodramatic comedy	Rather difficult
The Judsons Entertain	1	Evenly divided opportunities	Comedy	Easy
Green Stockings	1	Feminine star	English comedy	Fairly difficult
Adam and Eva	2	Evenly divided parts	Comedy	Interest depends on acting
Clarence	2	Masculine star	Comedy	Same as above
Smilin' Thru'	1	Feminine star Difficult roles Small cast	Romantic drama Very good	Difficult
Thirteenth Chair	1	Old Irish Lady star Large cast	Mystery drama	Fairly difficult
The Goose Hangs High	1	Evenly divided	Comedy with some drama Suitable for Christmas	Fairly easy
The Show Off (Royalty $50)	1	Masculine star	Comedy drama	Fairly difficult

certain part of the play; the first is graded on merit, and the others by comparison with him.

I. Voice—thirty-five per cent
   - carrying
   - clearness
   - expression
   - suitability

II. Appearance and poise—thirty per cent
   - suitability
   - posture
   - carriage
   - ease

III. Interpretation
   - personality
   - acting the part

Second try-outs may be held when necessary, and at least three competent judges should grade the contestants. These may be teachers or pupils, though if pupils act, they must be cautioned against partiality.

The cast then meets, and cuts the books, leaving out profanity and objectionable and unnecessary lines. The stage is set with chairs functioning as exits, furniture, etc. The players then "walk through" the first act, reading their lines and being instructed in their action. In working out the action the director should be sure that:

1. Action once given is changed as little as possible, and only for good reason.
2. Each player feels a reason for all his action.
3. The "stage picture" would be interesting at any time if the action were stopped.
4. The players face front or three-quarters front as much as possible.
5. The players do not stand in front of each other.
6. Any turns are toward the audience, not away from it.
7. Gestures are made usually with hand and foot away from the audience.
8. There is a center of interest at all times, and minor actors do not distract the audience's attention.
9. Every player stays in character, whether speaking or silent.

As to lines, be sure that:

1. From the very first, someone sits in the rear of the auditorium to see that the actors speak forcefully and slowly enough. Near the end of rehearsals, bring in someone not familiar with the lines to do this.

2. An actor is never allowed to use a wrong accent or emphasis. Habit grows quickly.

3. Cues are well timed. If there is to be an interruption, have the speaker learn a conclusion for the speech and go on until he is interrupted.

4. The players speak so slowly as to seem ridiculous to themselves. An impression of speed to show emotion may be given by cutting off words sharply.

5. Players should be stopped at first *when* a mistake is made. The last week corrections should not be made until the end of the acts except in serious cases.

At least four weeks besides the week for tryouts should be allowed for a three-act play. One act should be learned each week. Impress upon the actors that lines and actions are only tools; that the real work begins when these are perfect. Impress upon them, also, the necessity of thinking about their parts until they can actually live them.

A few rules are necessary for rehearsals. Our classes have adopted the following:

1. Attend every rehearsal, and arrive five minutes before the rehearsal is scheduled to begin.

2. Do not leave the hall without the director's permission.

3. Do not disturb the rehearsal in any way.

4. Be at every entrance one minute before cue.

5. Gather promptly after every act to hear criticisms and make suggestions.

6. Properties and costumes are *not* playthings.

7. Absolute silence behind the scenes is necessary.

8. Peeking out through the curtain or at the wings is amateurish.

9. Obey quickly and cheerfully.

10. Be alert; rise to every emergency; the play *must* go on.

Begin every rehearsal on time. Replace the laggards, but never wait for them.

It is well to vary the order of rehearsing, so that one act will not progress faster than the others. For instance, the schedule of rehearsals given in Table III might be followed.

As soon as the actors are at all familiar with their lines, insist upon their discarding books in order to develop confidence. For at least two rehearsals, prompters should be dismissed and the actors forced to rely upon themselves.

Frequently begin with the weakest act, while the players are fresh. Often amateur third acts are weak because they are always rehearsed

The players must always face front or three-quarters front.

when the actors are tired out from other acts.

The complete dress rehearsal with makeup should be held two nights before the play, as it is often long and wearying. The last rehearsal can then be a brief review, and all the actors can be in bed early for a good night's rest.

If the play is to begin at 8:15 o'clock, have the players report at seven o'clock, dress, and be made up. Call them together, and give last minute reminders about:

1. Speaking slowly and forcefully.
2. Waiting for laughs. Do not wait until the laugh is entirely over, but raise your voice and begin as it is dying down.
3. Never look at the prompter if they forget.
4. Rising to any emergency. It is a good idea to have them come together briefly for suggestions before every act.

We may now turn to the production staff. These people should be selected and put to work as soon as the actors are chosen. The staff used by our dramatic classes follows:

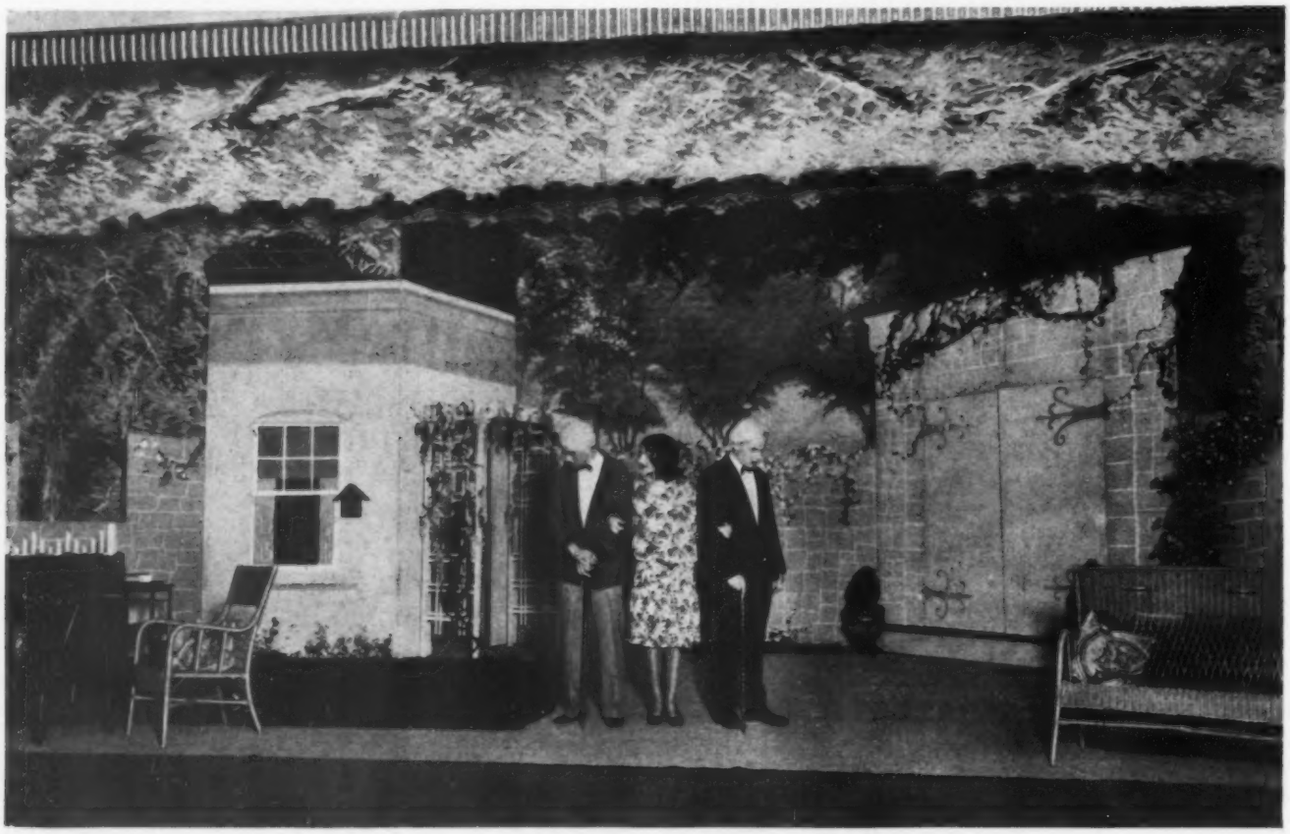
I. BUSINESS STAFF

1. *Business Manager*—Makes out the budget. Approves all expenditures. Keeps accurate accounts. Has charge at the door the night of the play. Deposits all money and pays all bills.

2. *Advertising Manager*—Budgets money to cover adequately the following requirements:
   a. Posters—printed and painted.
   b. Newspaper ads and stories.
   c. Handbills.
   d. Banner across street.
   e. Photographs.

Posters are put out three weeks before the play, and newspaper advertising begins about ten days before.

3. *Ticket Manager*—Conducts campaign. Has tickets printed and distributed. Gives out complimentary tickets. Checks up on all the tickets.



Parts must be "lived" by the actors to assure a good performance.

4. *Head Usher*—Chooses, trains, and supervises ushers for the play.

II. STAGE STAFF

1. *Stage Manager*—Pulls curtains. Supervises all work of stage staff, and is responsible for everything back stage.

2. *Assistant Stage Manager*—Sees that scenery is erected and all furniture procured and set up three days before the play. Sees that scenery is changed quickly. Sees that scenery is taken down after the play, and everything borrowed is returned the next day.

3. *Property Manager*—Borrows or buys all properties. Has them ready the last week. Prepares a list of things needed in each act and checks before each act, both during rehearsals

TABLE II—SUGGESTED ONE-ACT PLAYS

Usual Royalty—$5.00

Play	*Cast*	*Type*	*Ease of Production*
The Trysting Place	Good parts	Very funny	Easy
Station Y-Y-Y-Y	Young boy lead Good parts	Humorous radio comedy	Easy
Speaking to Father	Middle-aged man	Farce	Easy
Jazz and Minuet	Feminine star	Romantic comedy drama	Difficult
Maker of Dreams	Three characters	Romantic fantasy	Fairly difficult
The Valiant	Masculine	Drama	Difficult
The Robbery	Small cast	Comedy	Easy
Two Crooks and a Lady	Old Lady	Drama	Fairly difficult
Suppressed Desires	Small cast	Comedy	Rather sophisticated
Six Who Pass While the Lentils Boil	Medium cast	Fantasy	Fairly difficult

and play. Returns everything the next day. This manager also has charge of all outside "effects"—bells, music, etc.

4. *Prompter*—Attends all rehearsals and play.

5. *Electrician*—Plans and carries out all lighting effects.

6. *Costumer*—Plans, orders, borrows, etc., all costumes. Sees that all are checked in after play and returned the next day.

7. *Makeup Mistress*—Buys makeups. Supervises makeups at dress rehearsal and play. Cleans up afterwards.

These pupils have as many assistants as needed depending on the type of play. There may be a pupil assistant director to relieve the coach of the task of frequently checking up on the work done by the staff, and also to assume her place the night of the play so that she may go in front to watch the action. Be sure that the staff members attend sufficient rehearsals to make the production smooth. Have as many as needed back stage during the production, but *no extras.*

The budget for a recent play follows. Conditions, of course, will alter the circumstances:

Gross Receipts		$485.50
Expenses		
Royalty	$25.00	
Books	8.75	
Costumes	22.00	
Makeup	3.50	
Properties and Incidentals ...	11.00	
Scenery	25.00	
Advertising	35.00	
		130.25
Net receipts		$355.25

Play production may be as simple or as elaborate as it is necessary to make it. It takes work, but it is labor that produces such tangible and enjoyable results as to make it infinitely worth while. To one with any dramatic instinct, the work itself is always new, always thrillingly interesting, always all adventure. To the inexperienced coach it is only possible to suggest; begin modestly, work faithfully, and, as soon as you have confidence in yourself, strike out into the boundless sea of creative dramatic production.

TABLE III—SCHEDULE OF REHEARSALS

First Week	*Second Week*[1]	*Third Week*[2]	*Fourth Week*
Mon. I	Mon. I-II	Mon. I-II	Mon. I-II-III
Tues. II	Tues. II-III	Tues. II-III	Tues. II-III-I
Wed. III	Wed. I-III	Wed. I-III	Wed. I-II-III (Dress Rehearsal)
Thurs. I-III	Thurs. I-II	Thurs. I-II-III	Thurs. Weakest act first
Fri. I-II	Fri. I-III	Fri. III-II-I	Fri. Performance

[1] At the end of this week the first two acts should be learned.
[2] At the end of this week the third act should be learned.

The Problem of Tuition Charges and Collections

For those urban schools that must pay the expenses of pupils from districts outside the city, this solution will be of more than passing interest

By GEORGE HOWE, Business Manager, Board of Education, La Crosse, Wis.

IN TREATING the subject of tuition charges and collections from outlying school districts the school board of the city of La Cross, Wis., is governed by the following state laws of Wisconsin:

40.47 High School: Admittance: Tuition

1. Course of Study. The high-school board shall determine, with the advice and consent of the state superintendent, the course of study and the minimum standard of qualifications for admission.

2. Entrance Requirement. A certificate or common-school diploma issued by the county superintendent that the holder thereof has completed the course of study provided by the state superintendent for the common schools, shall be evidence of the completion of the course of study required by this section. Such certificate or diploma, or a certified copy thereof, shall be filed with the school district clerk upon admission of the holder to the high school, and shall be attached to the claim for tuition.

3. Nonresidents. The board shall admit to the high school, when facilities will warrant, any person of school age who resides in the state, but not within any high-school district, and who shall have complied with the entrance requirements of subsection (2). Nonresidents so admitted shall be entitled to the same privileges and be subject to the same rules and regulations as resident pupils.

4. Tuition. Every high school shall be free to all persons of school age resident in the district. The board may charge a tuition for each nonresident pupil, and this provision for tuition shall be available to a public high school without this state; provided, its course of study is equivalent to Wisconsin's, and provided it is nearer the pupil's home than is any Wisconsin high school.

5. Claim for Tuition. Before July in each year the high-school clerk shall file with the clerk of each municipality from which any tuition pupil was admitted, a verified claim against the municipality setting forth the residence, name, age, date of entrance, and the number of months of attendance, during the preceding school year, of each person admitted from such municipality, the amount of tuition to which the district is entitled for each pupil, and the aggregate sum for tuition due the district from the municipality.

6. Tuition Tax. The municipal clerk shall enter upon the next tax roll such sums as may be due for such tuition from his municipality and the amount so entered shall be collected when and as other taxes are collected, and shall be paid to the treasurer of the high-school district. If a portion of such municipality forms a part of a high-school district, the taxable property in the portion shall be exempt from such tuition tax.

7. State Graded School: Nonresident Tuition. The school board of any district which maintains grades above the eighth shall admit nonresident pupils of school age to these grades whenever the facilities will warrant; providing such pupils shall satisfy the conditions of section (2). The school board shall fix the tuition of said nonresident pupils. And such tuition shall be collected and paid in the same manner as tuition is collected by and paid to high-school district for the attendance of nonresident pupils.

8. Condition of Tuition. No district shall collect tuition as provided in subsection (7) unless the work done in said grades shall have been up to the required standard.

9. University High School. The proper authorities of any town, village, or city, the whole or a portion of which is not within a free high-school district, may authorize residents of such town, village, or city who do not live within a free high-school district to attend the high school maintained by the University of Wisconsin. The tuition shall be the same as required of other pupils.

10. Tuition at University High School. The clerk of the town, city, or village shall file with

Form T-2

BOARD OF EDUCATION

LA CROSSE, WIS.

NON-RESIDENT PUPILS

Please fill out the following and return to the office as soon as possible. Read the questions carefully and answer all of them accurately.

Any pupil whose parents live outside the city limits constitutes a non-resident pupil, and must fill out this blank.

Name _____ Age _____

Home Address _____ in the

Residence while in La Crosse _____

Name of Party _____ Phone _____

City, Township, or Village of _____

Name of Father, Mother, or Guardian _____

Address _____

School attended before entering L. C. H.S. _____

Give the dates you have attended L. C. H. S. in the following years:

Freshmen Year From_____, 19____, to _____, 19____

Sophomore Year From_____, 19____, to _____, 19____

Junior Year From_____, 19____, to _____, 19____

Senior Year From_____, 19____, to _____, 19____

Your present Grade in the L. C. H. S. _____ In case you reside in Wisconsin give the name of the

Township or Village in which you live _____

Number of School District you last attended _____

Name of Town or Village Clerk _____

His Post Office Address _____

Name of Town or Village Treasurer _____

Post Office Address _____

Is there a High School in your Town or Village? _____

In case there should be any claim that would exempt you from paying tuition kindly state your reasons

below _____

_____

_____

_____

Date, _____, 19____ Signed _____

Form T-2, which all nonresident pupils must fill out before beginning school.

RECORD OF NON RESIDENTS.

Name _____ Date _____

Home Address _____

La Crosse Address _____

Graduated from _____ Grammar School

Entered La Crosse High School _____

Attended La Crosse High School _____

19	19	19	19	19	19	19	19	19	19

Dropped or Left _____ Graduated _____

Remarks _____

A permanent record of the nonresident pupils is kept on these cards and aids in later investigations.

the bursar of the university a copy of the resolution authorizing attendance at the university high school, and the bursar shall on or before the first day of July of each year make a sworn statement to the clerk of such town, city, or village showing the amount of tuition due as required by subsection (4) of this section. Upon receipt of such statement taxes shall be levied for payment of the tuition, and the tuition shall be paid the university in the same manner as taxes are levied and monies paid for tuition for attendance at free high schools. Nothing in subsections (9) and (10) shall be construed to require the university to admit persons to the high school, and it shall be the sole judge of its capacity for seating and instruction and the qualifications of the applicant for admission.

11. Such tuition shall be determined by dividing the total salaries paid the teacher and principals, and the high-school cost of textbooks, supplies used in high-school instruction, manual training, and domestic science by the total enrollment for the year, but not to exceed the sum of three dollars per pupil per week, nor be less than two dollars per week per pupil. The clerk or secretary of any school board making the sworn statement concerning tuitions claimed, shall, when requested so to do by the town, city, or village to whom such statement is sent, furnish a sworn statement in detail of the salaries paid teachers and principals and the total enrollment for the year.

40.535 TUITION IN TWELVE-GRADE SCHOOLS

1. The school board or board of education of any city maintaining a graded system of schools of at least twelve grades, but no free high school, the four upper grades of which contain substantially the same amount of work as adopted and offered in free high schools established under section 40.62, the board of any district maintaining a free high school, and the board of any state

Phone No. _____ Date _____ 192___

My name in full is _____

I live at _____ Street

Does either your father or mother live out of the city? _____

My parents' or guardian's name is _____

My parents or guardians live at _____

School last attended (before entering this school) _____

My grade is _____ in the _____ School

Date of Birth _____ Age _____ Years _____ Months

My father's occupation is _____ Have you been vaccinated? _____

For ready reference the record of nonresident pupils is placed on these cards to be filed in the office.

Form T-4

BOARD OF EDUCATION

LA CROSSE, WIS.

I hereby certify that_____ is my son, daughter, or ward, and that the tuition for the above named pupil will be paid by me on the dates set by the rules and regulations of the Board of Education. The rate of tuition is $100.00 per school year.

(Signed) _____

Student's Signature. _____

Date, _____, 192__.

Pupils paying their own tuition must fill out Form T-4, which bears the signature of the parent.

Form T-3

BOARD OF EDUCATION

LA CROSSE, WIS

NON-RESIDENT PUPILS

I hereby certify that _____

is a resident of the Town or Village of _____ and the amount of the tuition for the attendance of this pupil will be placed on the tax roll of the above named town or village and collected with the other taxes and will be paid to the Board of Education at La Crosse, Wisconsin, as soon as taxes have been collected. The rate of tuition is $100.00 per school year of ten months. Sworn statements of the attendance of the above named pupil will be furnished the town or village clerk at the close of the school year

_____
Name of Town or Village Clerk.

_____
Name of Town or Village.

_____
Student's Signature.

Date, _____, 192___

Above, Form T-3, which must be filled out by an official of the village from which the pupil comes. Right, Form T-1, which certifies that the nonresident pupil has completed a common-school course of study.

Form T 1

BOARD OF EDUCATION

LA CROSSE, WIS

NON-RESIDENT PUPILS

THIS IS TO CERTIFY that _____ age_____, completed the course of study prescribed for the common schools in District No. _____, Town or Village of _____ on _____, and is entitled to all privileges granted in
DATE
Section 40.53 of the Statutes of 1919.

Signed _____
County Superintendent.

_____
Student's Signature.

Date, _____, 192___.

graded school offering an approved course of instruction in the ninth and tenth grades shall be entitled to charge nonresident pupils as tuition an amount to be determined by or agreed upon by one of the methods provided in subsection (2).

2. Such tuition shall be determined by dividing the total salaries paid the teachers and principals, and the high-school cost of textbooks, supplies used in high-school instruction, manual training, and domestic science by the total enrollment for the year, but not to exceed the sum of three dollars per pupil per week, nor to be less than two dollars per pupil per week.

3. The clerk or secretary of any school board or board of education making the sworn statement concerning tuitions as required by section 40.47, shall, when requested to do so by the town, city, or village to whom such statement is sent, furnish a sworn statement in detail of the salaries paid teachers and principals and the total enrollment for the year.

The cost per capita in our schools based on the above mentioned laws covering the cost of instruction, books, and supplies is fifty dollars for grades one to eight inclusive and one hundred dollars for grades nine to twelve inclusive. The methods of collecting the tuition are the result of ten years or more of careful study on the part of the business management of our schools, together with the superintendent, school principals, truant officer, and the clerical force.

Numerous Attempts to Avoid Payment

The source of all the information regarding the collection of tuition arose from a constant effort on the part of parents, pupils, relatives, and town or village officials trying to avoid the tuition payments levied by our board. We have had any number of residents of our city who have relatives or friends sending their children to the city schools using every effort possible to avoid paying tuition. These people do not realize, however, that a considerable amount is collected each year, and it assists materially on the credit side of our annual city budget. It is very interesting to watch the various methods used by children, parents, and relatives to avert the tuition laws. I will not try to enumerate the many instances of stories both pathetic and clever, but will say in passing that they would require a school detective to run them down.

Uncovering fictitious addresses seems to be a task of paramount importance. I will pass over the development stage of arriving at our present system of tuition collection and give what we regard as a perfected system in our present school administration.

Our best check on nonresident pupils attending our schools is found by securing a list of all eighth-grade graduates from the county superintendents in the surrounding counties where we expect to have pupils enter our schools. This list is checked against the enrollment cards of the various schools, and in this way we discover whether any nonresident pupils are attending our schools and giving a city address. This system never fails to reward us with from eight to ten pupils who were in some way trying to avoid the tuition situation. We are also able to discover nonresident pupils by information given in lines number four, five, six, and seven on our enrollment cards. At times we are able to discover additional tuition pupils by consulting our old lists when older brothers and sisters attended.

Tuition Due in Advance

During September the nonresident pupils are required to report to a designated room in each school building where they fill out the tuition forms. At this point, I might state that our tuition is divided into two classes. The rules of our board require that pupils who pay their own tuition must pay in advance. The rule has never been carried out, and most of September, October, and sometimes November is allowed for the payment of tuition by private parties living outside of our school district.

The other method relates to the collection of tuition from outlying towns and villages. In this case the state law is followed and a list is mailed to the town clerk at the close of each school year whereupon he enters it on the tax roll of the following year.

All children are required to fill out Form T-2. Before continuing their studies, they are also required to file Form T-1 with the school principal. Pupils coming into our schools from towns or villages are required to have Form T-3 filled out by the proper town or village official, and pupils paying their own tuition are required to fill out Form T-4. Cards are used chiefly in high school to keep a perpetual record of these pupils from out of town.

Legal Help Occasionally Necessary

After all this information has been gathered, it comes to the office of the board of education where it is checked with the lists of graduates gathered in June from the county superintendent. Occasionally, we find it necessary to seek the help of the city attorney, state superintendent, or attorney general in titling a pupil as a nonresident, but in most cases all tuition matters are settled by the board of education.

A Study of the School Building Program of San Francisco

Factors over which the school board had little or no control have, until quite recently, caused the delay of greatly needed school construction

By DAVID P. HARDY, Deputy Superintendent in Charge of Business Affairs, San Francisco Public Schools, San Francisco

IN ORDER to understand fully the building problem that confronted the San Francisco board of education in 1920, it is necessary that a number of facts be given in regard to the physical geography of the city and the buildings and sites in use at that time.

On April 18, 1906, the famous San Francisco earthquake had shaken the city to its foundations and had been followed by a disastrous fire that was only controlled after it had burned for three days, and had wiped out more than 2,380 acres of the business and residential districts of the city. Included in this area were twenty-nine schools, comprising 285 classrooms, that were either wholly destroyed or rendered unfit for use.

The population, of course, immediately shifted to newer sections of the city and buildings had to be provided near the new homes. The buildings of the burned area were also replaced in many cases. A considerable number of frame buildings intended for temporary use were constructed near the edge of the burned district and a bond issue voted by the people was used to construct twenty-five buildings of the best type obtainable, these schools being completed between 1908 and 1912—the only criticism of all of these being that they were found to be too small and that additions were not easily made to them.

Lack of Finances Delayed Construction

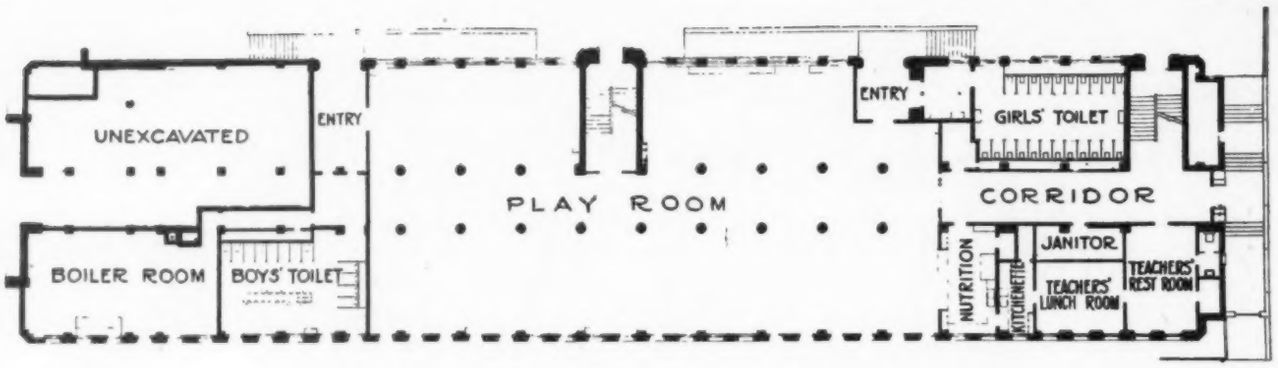
Due to financial pressure, permanent buildings were not substituted for the earthquake shacks and for obsolete wooden buildings as rapidly as had been hoped. With the coming of the World War this replacement was postponed still further and the board of education found itself in 1920 with approximately thirty school buildings that were described in an official report made to the board at the time as "antiquated, of old type wood construction, too small and poorly equipped." Many of the buildings that escaped the fire had been constructed in the period between 1870 and 1880 and were entirely unsuited to modern requirements.

It is desirable to understand something of the size and topography of the city. It is bounded on three sides by the Pacific Ocean and San Francisco Bay and on the south by a range of practically impassable hills. Railroads entering the city from this direction must do so through tunnels and passengers from other railroads having terminals in Oakland must cross the bay on ferries. Within the city itself are other hills so high and rugged that it has been found to be good business to drive three street railway tunnels through them in order to reach the home districts of the city and enable the business man to reach his office without undue delay. One of these tunnels, that under Twin Peaks, is more than 12,000 feet long and cost the city $4,500,000. Another, the Duboce Tunnel, which was recently completed, is 4,230 feet long and has cost $1,650,000 to date. The Stockton Street vehicular tunnel is 1,324 feet long and cost $650,000.

City and County Combined as One District

San Francisco and San Francisco County, which are combined as a single elementary and high-school district, contain forty-three square miles, of which seven are reserved as large parks, military reservations, or reservoir sites. Thus a city with an estimated population of 650,000 is concentrated into thirty-six square miles, no point of which is more than four miles from the city hall.

Further, San Francisco is a city with an assessed valuation of $783,000,000, based on a forty per cent valuation, and is the financial center of the West, yet it has a public-school population of less than 65,000 in average daily attendance. This is caused by the fact that it is surrounded by towns and cities to which the speeding automobile or the picturesque ferry-boat carries the head of the household after his day in



The basement floor plan of the Lafayette School, San Francisco, showing the space devoted to the playroom.

the office, and where the children attend school. There is nothing wrong with San Francisco's weather conditions, but these other communities have the superlative climates written about in literature emanating from Florida and Los Angeles, which San Francisco only approximates. Within the constrained city limits there is every elevation from sea level to three peaks, each more than 900 feet high.

The city is thus divided into numerous small valleys that have grown up as separate communities and are cut off from each other to such an extent that it is difficult to get from one to another except by street car or automobile. There are also thousands of acres of what less than twenty-five years ago was white beach sand and sand dunes.

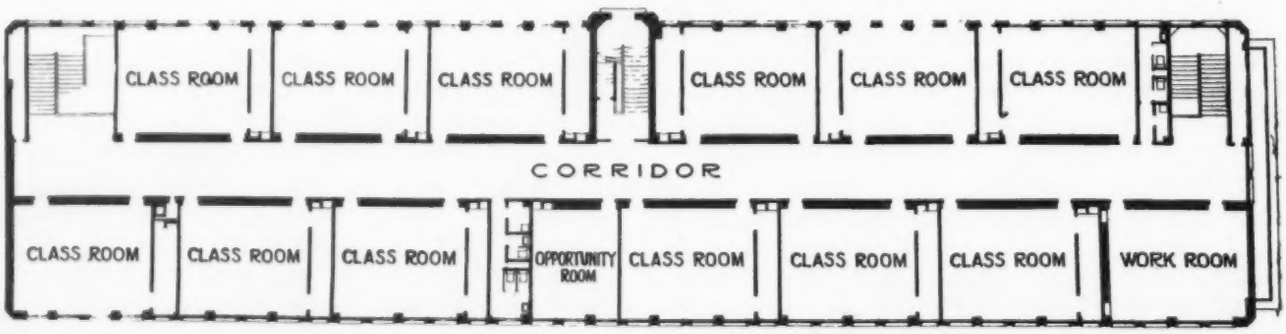
Effect of Conditions on Buildings

These physical conditions have their effect upon the size and type of buildings, and especially upon the kind of play yard that can be provided. Arteries of travel are few in number, expensive to open, and still more expensive to widen now that the city is so densely built up. School lands are naturally costly to acquire in the older sections of the city and the board of education deserves credit for the vision that is providing four high-school sites in the newer residential districts with from nine to sixteen acres each and new elementary sites of corresponding size. As much as $443,000 was paid for the land and improvements for the four-acre site of a junior high school in one of the congested flat building districts. More than 400 families were forced to seek new homes and an entire parish of one of the churches was abandoned due to this migration. A minimum of forty square feet of play space per pupil has been set and is provided in all cases, but twice this amount or more is actually available in practically all schools.

Needs Met by Board Issues

The board of education of San Francisco has always believed that buildings should be constructed from tax money covering the needs as they arose. The board of supervisors, before whom these requests for appropriation were placed, did not see fit to grant them, thus accumulating building needs. From time to time these needs have become so acute that bond issues have been asked for and in every case have been voted by the people. This was the situation in 1922, and at the urgent request of other city commissions, the board of education allowed itself to be persuaded to sponsor a $12,000,000 bond issue on the express promise that this money was only to be spent for replacements and that an allowance would be made in future tax rates to cover growth and expansion.

As is probably the case in other cities, the board of supervisors fell back into the position that new tax money was not needed as long as unexpended funds remained from the bond issue,



Second floor plan, Lafayette School. This building has a north and south axis.

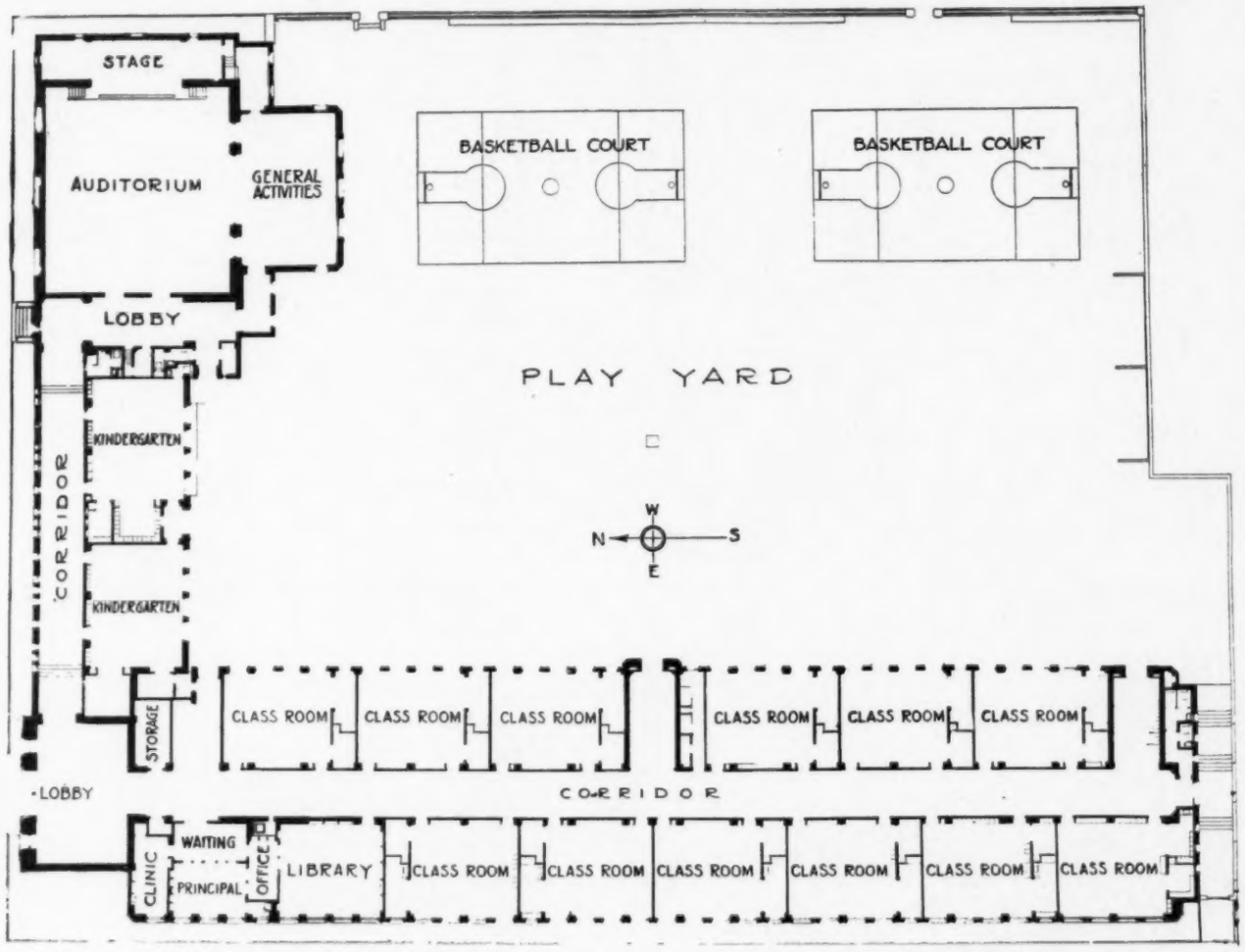
and it neglected to levy these promised taxes for a number of years following 1923. In 1927 the board of education demanded that the board of supervisors levy a tax to raise the full amount deemed necessary for school building purposes, and quoted the state law as authority for its action. On the refusal of the board of supervisors, a suit was brought and the educational authorities were sustained in the Supreme Court of California. This means that the board of education may now plan its expenditures for the future with the assurance that such money as it requests will be available.

The growth of school population in San Francisco has been extremely steady, varying somewhere between 1,700 and 2,500 per year. Based on past experience it has been decided that an annual authorization of approximately $2,100,000 will cover the upkeep and maintenance of school buildings, will provide the additional facilities required by growth, and will gradually replace plants that are not considered adequate at this time.

As a matter of policy no fire insurance is carried on any municipal or state buildings in San Francisco. With so many high-class risks scattered over the entire city it is believed that the wisdom of this course has been thoroughly proved. The only fires of consequence occurring in the past twenty years have burned buildings that would have been replaced by this time in the natural course of events and any normal amount of insurance would have done little good in paying for the new buildings erected.

Including the $12,000,000 bond issue of 1922, unexpended money remaining from a previous bond issue in 1918, money derived from special school taxes, and other miscellaneous sources, the sum of $23,700,000 has been expended since 1920 in providing new facilities and in expanding schools already existing, providing seats for approximately 39,000 pupils. Between one-third and one-half of this has cared for expansion and the balance has gone to replace seats in inadequate and unsafe buildings. Nearly $5,000,000 of this amount has been spent in enlarging existing sites and in the purchase of new ones.

After the approval of the 1922 bond issue, the



First floor plan, Lafayette School, showing the space devoted to a protected play yard.

board of education ordered a comprehensive survey of the entire school system. Large scale maps were prepared showing the exact location of each pupil's home and the school that he attended. A program was decided upon and was reviewed and approved by a committee of eminent educators and school administration experts from outside the city department. Actual work was then begun and has been under way up to the present time.

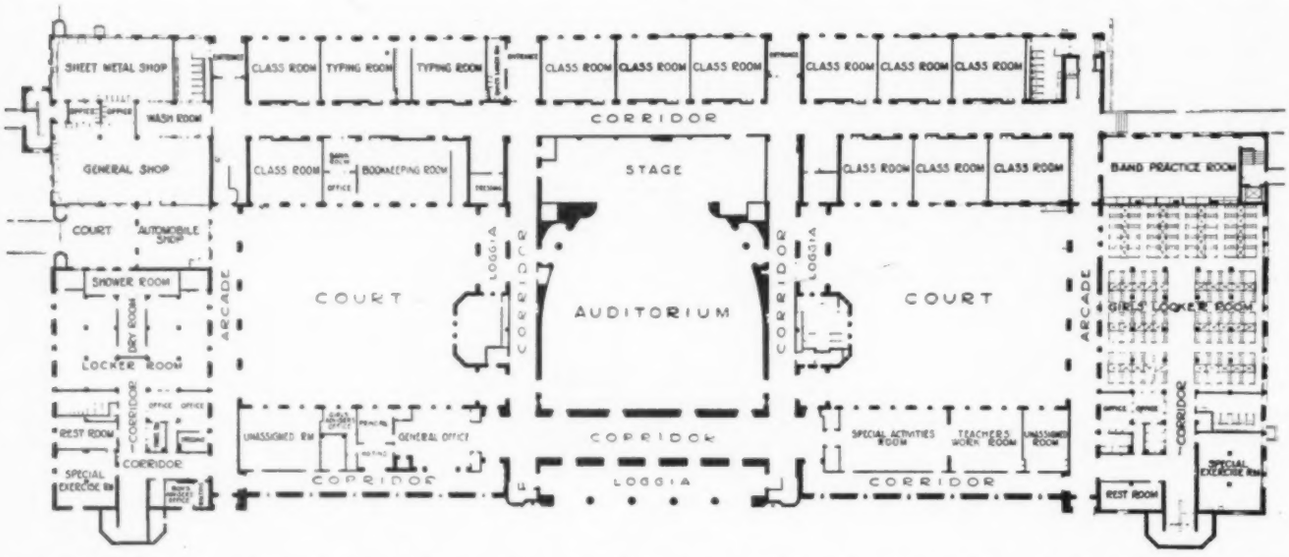
It is interesting to note that the report of the superintendent of schools for 1908 shows exactly the same number of schools in the city as that for 1928. This, of course, means that each school has been enlarged and this has resulted in a definite decrease in the overhead cost of the various plants. At the present time there are seven senior high schools, eight junior high schools, and eighty-five elementary, grammar, and special schools. This gives an average school enrollment of approximately 700. The ideal size of a senior high school has been set at 2,000, that for a junior high school at 1,500, and for an elementary school at 1,000, these figures corresponding with similar ones in other parts of the United States. It has been found possible to approximate these figures fairly closely in many schools due to the manner in which the city has been built.

Ordinarily an elementary school draws from a district having a one-half mile radius, a junior high school from one with a mile radius, and a senior high school from a district with a one and one-half mile radius. No pupils are furnished transportation to school except a few attending special schools for the physically handicapped, and their number is always less than one hundred.

The junior high-school program is being carried forward as rapidly as possible and should be completed within the next five years, the plans calling for from fifteen to seventeen of this type school.

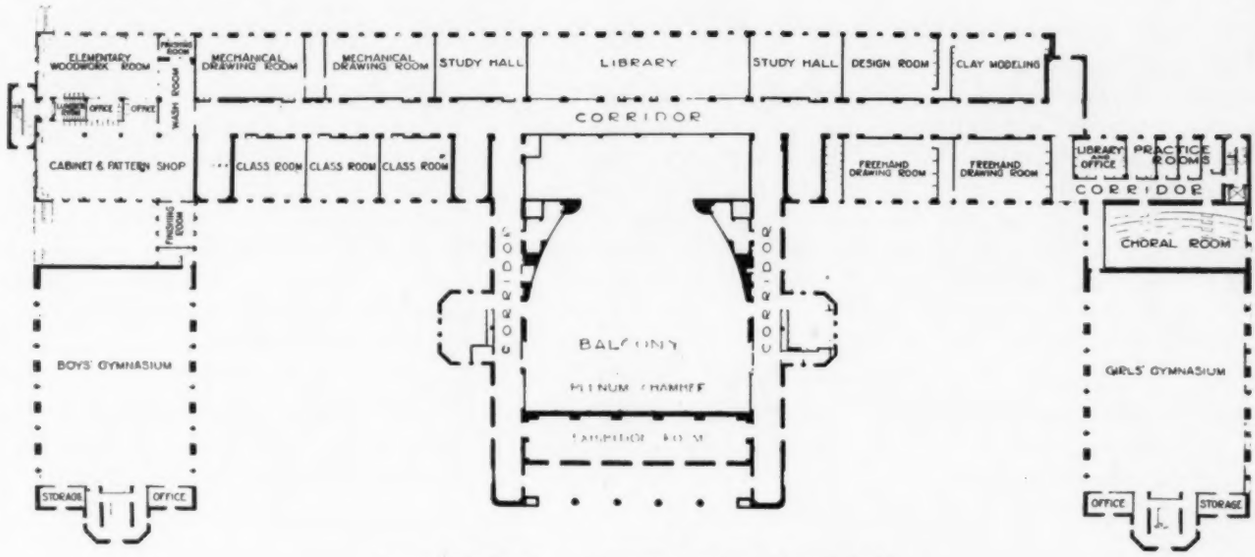
The average cubage of a standard elementary-school building, figured from one foot below the lowest floor level, is approximately 1,000,000 cubic feet. The average cost has been somewhat less than $330,000, thus giving an average unit cost of between thirty and thirty-three cents. It must be remembered that this includes the development of the yard and considerable built-in equipment.

The general class of school structure has been a type A building, with reinforced concrete frame, reinforced concrete roof and floor slabs, concrete or brick curtain walls, not over two stories in height, and having reinforced concrete fire-resisting stair towers within the building rather than extensive fire escapes. Rooms are built on both sides of corridors twelve feet wide, and enough stairways are provided so that there is one for each four rooms on a floor. All stairways are illuminated by natural light. In the case of secondary schools it has been found necessary to build most of the buildings three or four stories in height to conserve the limited land areas available.



First floor plan, Everett Junior High School, San Francisco. Ample illumination is provided by the use of light courts.

The main portion of all buildings is built on a north and south axis, thus providing east and west light in the classrooms. A south light has been found to be undesirable since shades must be drawn most of the time. Prevailing winds are from the north and west and the mass of the building is therefore built along the western line of the lot, thus providing a protected yard, open to the south and east. Auditoriums are usually



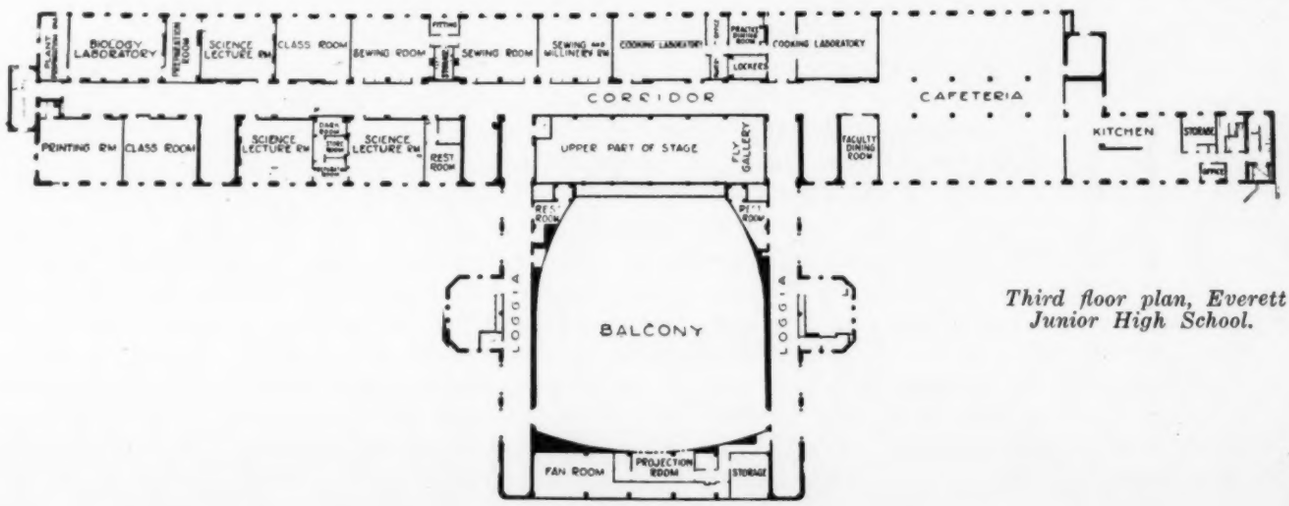
Second floor plan, Everett Junior High School.

at the north end of the lot. Full use of the school buildings by boy and girl scout troops, parent-teacher associations, and other community interests is desired by the board, and auditoriums are provided with separate street entrances, independent heating and lighting facilities, and public toilets, so arranged that the main part of the school may be cut off by collapsible iron gates and a public meeting provided without fear of interference with school materials. Toilets are arranged in the same way, in conjunction with the playgrounds, and seventeen of our school yards are regularly supervised by representatives of the playground committee after school hours and on holidays.

In general construction the buildings correspond almost exactly with those that have been built throughout the United States in recent years and because of this only those details that are peculiar to this section of the country will be treated.

Under the provision of the city charter all public buildings are constructed under the supervision of the board of public works who hire architects and furnish the inspectors to see that the requirements, as agreed upon by the board of education, are carried out. Much criticism has been leveled at this system and statements have been freely made that millions of dollars might have been saved by the use of "standard" plans and specifications. Of course, the details of the individual classrooms have been decided upon by the school department and are standardized, but the consensus of opinion of professional men connected with building work is that the school sites vary so greatly in size, exposure, slope, and in type of surroundings, that each one is a problem in itself and the building can only be designed after a special study of its particular needs.

While eleven elementary schools have been completed in the last two years, the result of this policy has been a pleasing diversification of appearance, which seems to justify the increased cost of architects' services. Most of the buildings



Third floor plan, Everett Junior High School.

have been finished in cement stucco, trimmed with cast cement or terra cotta, while a few are veneered with brick or with brick and terra cotta. It is the practice to include in the original contract the linoleum covering of the floors and many built-in desks and cabinets that might ordinarily be included in equipment. The fittings of stages and moving picture booths are also installed and included in the contract.

Follow Rules of City Departments

The regulations of the building, fire, and health departments are stringent and are lived up to exactly in the construction of all buildings. Frequent inspections are made by all of these bureaus and their recommendations are carried out promptly.

The surface of all school grounds is covered with three inches of concrete and a one-inch asphalt wearing surface. This is largely because of the sand which makes any other development in the yard undesirable. Considerable money is spent in building retaining walls because of the differences in level from one side of the sites to the other. Several school yards have had to be divided into four levels.

Playground Protection

Planting is confined to the front of the buildings. All grounds are surrounded on the street sides by galvanized storm wire fencing, six feet high, with gates. These are not ordinarily locked even at night, but provide protection to the children in a number of ways. A standard fence with six feet of tongue and groove boards and eight feet of galvanized storm wire fencing above it has been used between school yards and adjacent property.

Roof playgrounds have been provided in a number of schools in the built-up districts and are extremely useful, although it has been found somewhat difficult to keep them water tight. Advantage has been taken of the slope of the ground to allow the yard to extend under a portion of the building in many schools, thus providing a covered play space where children may assemble in rainy weather and that is not in any way to be considered as basement space. Basements, as such, have been omitted from all recent school buildings, the boiler room being the only one below ground level. Elevators are provided only in secondary schools that are three or more stories in height and their use is restricted to teachers and physically handicapped pupils.

The standard cloakroom has been modified in all elementary-school classrooms into an alcove and cloakroom proper. The alcove, approximately seven by fifteen feet, provides a small room connected with the main classroom by an archway into which a number of pupils may be sent to study some group project and where they will not interfere with the work of the other pupils. A greatly increased amount of built-in shelving and closet space has been provided to care for the materials required by the newest courses of study.

After a number of years of experimenting with substitute blackboards, a decision was reached to return to slate, this type now being standard in all schools. Cork carpet pinning surface is generously used in all rooms, being alternated with the blackboard space.

Schoolroom Equipment

Movable furniture is standard equipment throughout the schools. The kindergarten and primary children sit at two-pupil tables that may be grouped in various ways in the room. Elementary-school pupils are provided with nonadjustable combination desks and chairs that are arranged in the usual manner of the screw-down desks. These provide individual lockers below the seat. Junior and senior high-school pupils have a similar desk-chair without the locker, a book rack being substituted. Individual steel lockers are furnished in the corridors of secondary schools. Folding chairs fastened together in groups are used in elementary-school auditoriums, while standard opera chairs fastened to the floor as in theaters are installed in all junior and senior high-school auditoriums.

Improve Luncheon Facilities

Cafeterias have been provided in all junior and senior high schools, and nutrition kitchens opening onto the covered play spaces in elementary schools. There is a definite tendency on the part of the parents to demand a more elaborate provision for lunch, even for the smaller children, and the latest schools have been showing a dining room with tables and benches, either in conjunction with the play space or with some other special room that can be so utilized for part of the day. Several typical layouts are being closely checked to determine the most useful and economical plan.

While great stress has been brought to bear upon the board of education to modify its high standard of school buildings in order to provide more accommodations with the money available, it has steadfastly proceeded along the lines originally laid down and every investigation made by outside organizations has resulted in approval of this policy.

Uses of Standard Tests and Scales by School Administrators

Stock taking and annual production measurement, teaching staff supervision, instruction improvement, and educational research are practical applications

By HARL R. DOUGLASS, Proffessor of Education, University of Oregon

IT IS of interest to those of us who are engaged with school administration that the first use of standard tests and scales on any large scale was in connection with the school surveys that began with the survey of the schools of the City of New York in 1911, and made in so many cities in the decade following. It was realized by those in charge of the surveys that the simplest, quickest, and most reliable way to estimate the educational status of the pupils in a school system is by the comparison of test scores in the different subjects of the curriculum with the scores representing achievements of pupils elsewhere. The beginning made in these surveys—this stock-taking—has been repeated in many school systems. In many it has never been done; no one knows in any definite manner in many cities whether the work of the schools is resulting in attainments of the pupils that are average, superior, or inferior as compared with what other pupils in other cities have been able to achieve. It seems certain, however, that this condition will not persist, and it is part of the burden of this paper to show why it will not.

School a Productive Enterprise

The school may well be thought of as a productive enterprise. Its raw materials are children, capacities for learning, minds, bodies, interests. The buildings, furniture, books, gymnasium, auditorium, visual material, and the like, constitute the plant and machinery. The product is the trained mind and body, a product that, of course, is never really finished. The function of the school is to contribute as much as possible to the refining of its raw materials in a given time. It is perhaps more like a department of a factory, rather than the complete factory, in which a part of the task of production is carried on, supplementing and supplemented by, the work of other departments.

The time was when, because of the lack of means of measuring the effects of teaching except in a very subjective way, attention was monopolized by the process, and the product was judged thereby. Procedure was judged by its logic and theory and was not subjected to any rigorous pragmatic checking in the light of products. That time, let us hope, is passing. I believe we may dare to expect the approach of a period when procedures may be tested in the laboratory of objective measurement and judged by results.

Similar to a Business Organization

Let us return to our factory illustration; for, after all, in many ways the production of educational products is analogous to the organization that produces less valuable commodities, and we can profit by certain lessons that producers in others lines have learned. The school administrator is the superintendent or general manager of his factory or business. His board of education is his board of directors. The patrons, taxpayers, and children are the stockholders.

To observe good business or manufacturing principles, the administrator should be able to make use of some plan of product-accounting. He should be able to deliver to his board at regular intervals—annually, probably—a statement of production. This is not as simple as in the manufacturing of brick, baby-carriages, bluing, or automobiles or in the sales of furniture, but the time has arrived when it can be done with at least some degree of accuracy and conviction.

From my post of observation on the university faculty, well out of the line of fire, I have learned some things about the administration of schools from the successes and failures of my friends in the field. I have made many observations as to what I would do or what I would not do should I again become a city superintendent of schools. One of these is the resolution that I should, during the first month of school, take stock of any school system, the responsibility of which I should assume, in case such an inventory was not available from the records left me by my predecessor.

I should want to know, at the beginning, the educational status of the pupils in every school in every subject. It seems to me to be no more good business for a superintendent of schools to take over a school system "sight-unseen" than for a business manager to take over a factory or store without an inventory.

Both parties, the public and the school official, are entitled to know the conditions of the schools when responsibility is transferred. The public doesn't know its rights and responsibilities in this connection. The school man must teach it these things. The idea of educational measurement is new to the layman, but it is taking hold rapidly. The concept of intelligence tests and of achievement tests is not now confined to school people. It is not an impossible task to sell the idea to the average board of education and, in fact, many superintendents have, through the publication in the local newspapers of test results and interpretations, been able to familiarize the community with the idea. Moreover, actual practice has shown that this type of school publicity is a splendid and practical means of arousing interest in the school and keeping the public informed of the fact that the school, under the direction of its executive, is making substantial and commendable progress in the conventional subjects of the curriculum.

Gain Should Be Shown Each Year

Once having determined the status of the school or schools in each of the various subjects, it is not difficult to measure the annual progress. Each year should show a gain—a growth comparable to the difference in the two adjacent grade norms at that point. For example, the gain of the fourth grade in reading in a year should approximate the difference between the fourth-grade and the fifth-grade norms. In case that grade is below normal at the beginning of the year, a little more than normal gain should be expected; and if above normal a little less may be expected for a given quality of teaching, assuming of course that the number of pupils is large enough to preclude the possibility of the pupils being a select group—brighter or duller than the average. If the number of pupils in a given grade exceeds a hundred or a hundred and fifty, the likelihood of its being a select group is small; but at any rate one need only refer to the intelligence test scores of the pupils to determine whether or not such is the case.

The school executive and his staff cannot be expected to bring a school system that is distinctly inferior up to par in a year, but should at any rate be able either to reduce the gap between present status and normality or to put a finger definitely and convincingly upon the "leak"—that is, the reason for under-production. It is quite possible that the production in a given year is not equal to that attained in other schools and still, for the money spent, is quite comparable. Yet research workers interested in cost-accounting in the schools are rapidly developing techniques for determining unit costs, and it is within the range of reasonable expectancy that we shall have, within the near future, a practical and reliable means of evaluating production in education in terms of cost. The superintendent even now may submit together costs, figures, and product data and make comparisons with schools of similar cost, or of cost with those of similar achievements.

Efficiency Must Be Studied

In every large production or sales concern there is at least one person to whom it falls to study the efficiency of the various departments or processes. It is the first charge of supervision to inspect, study, and improve the procedures of the line workers. There are several approaches to this task, but not the least valid and probably the most reliable is the objective measurement of the contributions of the various units of the school system and the various subjects in the courses of study to the product. An annual stock-taking such as we have been considering will answer certain questions in a way peculiar to itself. One building may be compared with another, one teacher with another.

A word of caution in this connection might be unnecessary to most readers of The NATION'S SCHOOLS, but should be observed; namely, that comparisons of teachers and of buildings are somewhat dangerous and subject to abuse. When such accountings and comparisons are emphasized in determining promotions and salaries to such an extent that teachers concentrate upon coaching their classes for test-taking, the harm done by such diversion of efforts from the broader aims of teaching operates to offset the value of the accounting. Then, too, we must concede that there are outcomes of teaching quite worthy of concluding that the difficulty lies with the teacher or methods. Comparisons should be made where possible with schools where these other variables are held constant.

There is no doubt though, that if there is in a school system a teacher or a number of teachers whose level of efficiency is below that deemed necessary for retention, the case of the school official in recommending the dropping of such teachers is strengthened by the presentation of

objective data relative to the progress of pupils under that teacher, or teachers in question. The same may be said with respect to the situation in which the official is making recommendations of teachers for special promotion.

An accounting as between progress made in the various subjects taught is often of much use. In that school in which the low sixth grade is well above the norm in history but in which the same grade is materially below the norm in penmanship, there is need for readjustment, making for increased production in penmanship, even if at the expense of arithmetic. To be sure, the average achievement, the norm, may not be the optimum, but it is much more likely to be than any other one level; and as the recognition of the need of a higher average level becomes generally apparent, this average or norm will of necessity adjust itself. In passing, however, we should note that the old concept of the one point norm; namely, the mean or the median is becoming antiquated as the greater usefulness of the percentile graph norm becomes apparent. By the latter standard one may make comparisons not only of average with average, but comparisons at any point may be made, upper tenth with norms for upper tenth, lower quintile with lower quintile, variability with variability.

Concentration Is Good Practice

Good supervision practice calls for concentration upon a small section of the front at a time. In many cities attention is concentrated upon one or two subjects one year, others the next, and so on in cycle. The annual inventory made possible by the testing program should serve as a starting point in such supervisory drives both in locating the battlefront and in determining the character of the campaign.

Survey after survey confirms the conclusion that the efficiency of various school systems is likely to develop unevenly with respect to the different subjects. Van Wagenen in a recent book, *Educational Diagnosis*,[1] shows that within the same city the fifth grade in one school may average higher than the average of the sixth grade in all the other schools in the city in one subject and yet be below the average by almost as much in another.

The most effective supervision is something more than inspection. It should be diagnostic as well as inspectory.

We have always realized in a more or less definite way that learning is individual and that errors and difficulties differ from individual to individual. This fact, well-established in schoolroom and psychological laboratory, tends to evade the focus of our attention, however, when we are busy teaching in the classroom. It is very difficult to observe the individual errors of different pupils. We cannot literally inspect the minds of the pupils, their mental contents and development; and could we do so, their very complexity would balk us.

While at first thought we do not see why it should be true, still whole classes may suffer special weaknesses or failures in the subject-matter of a course, the extent and significance of which are not apparent to the teacher. There has been accumulating a convincing literature of what may be done to speed up the progress of a class by a close diagnosis and remedial treatment. Instance after instance may be shown where improvement may be made in two or three months equivalent to that ordinarily made in a semester in arithmetic, reading, or other subjects by locating weaknesses in mastery of combinations, parts of processes, or defects of a corresponding sort in reading. The old two-phase cycle of teach-test, is being replaced in many schools and classrooms by the modern method of teach-test-diagnose-retest, and in some subjects it is preceded by a pretest, the purpose of which is eliminated from the course of study for the instruction immediately following those facts, skills, or other outcomes that the pupils already possess. Nothing could be more reasonable or practical. By such a procedure much waste is eliminated, and flaws in the product are brought to notice and polished off. Weakness in foundations is not permitted to persist to hamper or mar the superstructure. The shotgun method of supervision like the shotgun method in teaching has proved its relative inefficiency. In the war, phones and wires were employed to inform gunners of hits and misses.

Demonstrated in Portland

The possibilities of such procedure have been demonstrated in the Portland elementary schools in the research work conducted there under the supervision of Dr. B. W. DeBusk of the school of education of the University of Oregon. The results of remedial teaching based upon careful diagnostic testing have not only been an eye-opener to the teachers and the school authorities but to the bureau workers themselves. Whole grades in certain buildings have made twice the progress in a given period than is normal as a result of the location of special difficulties that needed special remedial treatment. The progress of pupils after such treatment may reasonably be expected to be marked, similar to the general improvement of the human being after the sources

[1] Van Wagenen, M. J. Educational Diagnosis. The Macmillan Co.

of poison have been located in the teeth, tonsils, or elsewhere and the offending part removed.

Unfortunately, an abundant supply of diagnostic tests are not available that will conveniently and reliably bring into relief specific weaknesses of a class or of individuals. A few like the Spencer and the Monroe arithmetic tests and the Franseen and the Charters tests for language-grammar are available, but there are serious obstacles hindering the development of such tests as rapidly as has been the survey type of tests. One of these is the fact that a diagnostic test needs to be closely adapted to the specific course of study. Another obstacle is the great length of a test which is an inventory of all possible facts, skills, or other outcomes of teaching, and the consequent difficulty in standardizing so long a test, to say nothing of the expense in purchasing for classes tests of such length.

More Than One Test Item

Not only does a diagnostic test need to be a good inventory of the more important skills, facts, or other educational outcomes, but to be reliable for individual diagnosis there should be more than one test item for each of these outcomes. The reliability of a test may be ever so high and yet the reliability of one item be quite low. As a basis for any reliable individual diagnosis, a child should be exposed to at least three test items for each type of education outcomes. Let us illustrate. To be certain whether a child knows that the product of x^2 and x^3 is x^5, or to be general, that in multiplication exponents are added, he should have at least three test items sampling this ability. The fact that a child misses once is not a very reliable criterion. If he missed one or two times it is still doubtful. The child should either miss or solve such an exercise at least twice before any confidence can be placed in a conclusion.

If the test of fifty items has a reliability of .90 the reliability of one item may be estimated roughly by the Spearman-Brown prophecy formula as approximately .15. For three items this becomes .30. For purposes of class diagnosis, however, this consideration does not obtain, as the chance errors tend to compensate each other in the larger number. For class diagnosis one item for each type of ability to be sampled need be included if that item is not subject to peculiarity of any sort in the way of interpretation or the like.

The practical difficulties operating to restrict the number of available, satisfactory, standard diagnostic tests were noted previously. The alternative that is being widely adopted in practice is the construction by supervisors or teachers who are adequately trained of objective, informal, diagnostic tests, adapted to the local course of study and mimeographed for use. The administrator should not only master the technique of this procedure but see that his teachers are trained in the use of it. Excellent treatment of such procedure with excellent illustrations is now available.

A most excellent book, mentioned previously, has recently appeared outlining a most useful plan and technique of diagnostic procedure in a school system. Suggestions and forms for the recording and graphical representation of test data convenient for follow-up work are furnished. While the title would indicate its emphasis of supervising and teaching diagnosis, the treatise has excellent discussions and practical directions for survey or inventory procedure. The book also discusses fully the topic of classification.

Perhaps space should not be taken here to mention data that have been furnished by the numerous studies and surveys made in recent years and that go to show how ineffective the ordinary subjective promotion plan is as a means of furnishing homogeneous groups for instruction.

Wide Variance in Ranges

In a study recently completed at the University of Oregon under the supervision of Dr. H. P. Rainey, we may note that in some of the best schools of Oregon there are, in the sixth grade, pupils ranging all the way in educational achievement from below the third-grade average to above the tenth-grade average in some subjects. In one city thirty-four per cent of the pupils in the sixth-grade exceeded the seventh-grade norm. In a certain Mid-Western city it was recently shown that if one merely divided the pupils of the upper four grades into four groups according to their height, they would be practically as well classified as to educational status and achievement and the apparent ability to progress as they were at the time.

The reasons for this are not hard to understand: (1) As Terman, Whipple, and others have pointed out, the quiet, superior child is often rated average, while the vivacious, bright-eyed, and bright-faced child of quiet manners is rated above his actual ability and capacity; (2) it is next to impossible to keep separate conduct and achievement in rating pupils for the good child will almost invariably be rated higher than the mischievious, wicked, or discourteous child of like achievement; (3) chance errors of observation influence the marks assigned by teachers, who often disagree as to the ratings of papers and pupils since some pupils have a knack of putting their best foot forward, while others are equally unfor-

tunate; (4) in altogether too many instances the promotion of pupils is influenced by the severe ideal of standards held by some teachers, the mercy and sympathy of others, the position of the parent of the child in the community, friendships, and other irrelevant factors; and (5) the fact that different teachers employ different standards for promotion likewise contributes to inadequate classification.

While it is very difficult to reclassify pupils on the basis of tests alone, certainly much more homogeneous groups will result from their use, and justice would be done to pupils and to society if the most flagrant of poor classifications were remedied periodically.

Of the three batteries of tests especially designed for the purposes of classification—the Illinois, the Stanford, and the McCall-Woody-Thorndike—perhaps the Stanford is the most practical and most widely used, owing to its extremely high reliability, its very carefully worked out norms, and the range of elementary-school subjects represented in the test. Handwriting, music, and art are not represented in the test, but the necessity for homogeneous classification in these subjects is not so great as for such subjects as arithmetic, reading, language, etc.

Various experiments in reclassification have been reported by McCall, Van Wagenen, and others. All of these point to the desirability of occasional careful reclassification. The opportunities for doing good in this connection make rural schools of a country seem very attractive.

Sectioning According to Ability

Another phase of classification to which much more attention is being given than was true a few years ago, is that of sectioning according to ability. The use of achievement and intelligence test scores along with previous grades should be emphasized for determining the division. A most simple and practical plan is to rank the pupils separately on the basis of achievement test score, previous grades, intelligence test score (or M. A.), and I. Q. and to arrange a ranking on the basis of the total of these rankings, allotting from this ranking to the various sections larger numbers of pupils to the faster sections and smaller numbers to the slower ones.

In those school systems in which a director of bureau of research is employed, that person may be trusted to outline the program of testing. In other schools, the administrator need not refrain from making use of standard tests because of the lack of such an officer. If he will but write to the school of education of the nearest state university or other institution known to maintain a school of education, outlining the purpose for which he wishes to employ tests, he will, in all likelihood, receive practical and detailed advice and suggestions that will enable him to carry on his testing project. They will be glad to recommend tests suitable to the purpose indicated in the request for information, make estimates of the expense involved, and furnish addresses of distributing concerns from whom the necessary tests may be obtained.

Follow Instructions Closely

With all the later and better tests, guides or manuals for those administering the tests are furnished. These are to be read carefully and followed closely, as the instructions and procedure differ widely from test to test. A small book on statistics like Pressey's *Handling of Test Scores* or Rugg's *Primer of Statistics* will furnish descriptions of statistical technique needed in the organization and interpretation of test scores.

When Seeking a Superintendent

The board of education seeking a new superintendent should first decide what qualifications he should have for the particular position and then start a search for him. He may be found in one of the assistant superintendents, or in some one else connected with the school system. It may, however, be necesary to go outside for the superintendent. When this is done, extreme care has to be exercised. The strength and weakness of an assistant superintendent are well known to the board and to the public without investigation, but the qualification of persons outside the school system are not so well known.

A long list of qualifications for a city school superintendent might be listed by the board in search of a superintendent—so long, in fact, that no one could qualify. Among the more important qualifications that might be mentioned, in addition to certain educational qualifications, are ability to get things done in an efficient way; ability to select the right assistant superintendents, principals, and teachers; a willingness to delegate details to subordinates and to hold them responsible for results; and ability to arouse an interest in the schools of the city.

Some questions that should be asked regarding the person being considered for a superintendent are: Is he a man of practical ideas? Has he in his present position done anything worth while? Can he do worth while things in the face of opposition and finally win the confidence of his opponents?—*W. S. Deffenbaugh, chief, city schools division, Bureau of Education.*

Consolidation and the Enriched Curriculum

Four programs are suggested to improve the course of study and still meet the fundamental needs of various types of rural schools

By JOHN G. ROSSMAN, Assistant Superintendent of Schools, Gary, Ind.

THE CONSOLIDATED school, compared with the one-room rural school, is generally accepted as a decidedly forward step. In many instances, however, this consolidation means the grouping of a number of rural schools under one roof with an organization in which little has been done in improving actual teaching conditions and making possible the enrichments that are demanded in meeting present-day educational obligations. The following examples set forth a comparison of two types of organization possible in consolidated schools. There are also outlined type programs for schools of various sizes illustrating more effective programming.

An Unsatisfactory Arrangement

In Gregg township there have been, for the past forty years, fourteen elementary-school buildings, each housing the first eight grades. The average daily attendance has been less than twenty in each center and the offerings afforded the children have been most meagre. More recently, with the advent of good roads, the demand for better teaching, the evident need of an enriched curriculum, all coupled with the unsatisfactory physical condition of almost all of the fourteen buildings, the local trustees decided upon consolidation, following more or less, the conventional program.

The new building provided contains eight classrooms, one auditorium, one gymnasium, a boys' shop, and a girls' shop, twelve units in all. It has been possible to assign one grade level to each classroom and in each of these classrooms the same "sit-at-a-desk," book experiences that the one-room rural school gave the child are brought to him. An advantage is gained in that the teacher is better fitted to do the work of that particular grade and has more time in which to do it. The auditorium is used once each day for a period of fifteen minutes for a general convocation. It presents real problems to all concerned in the endeavor to secure something that will be of interest and profit to both the first-grade pupils and those of eighth-grade level. The gymnasium comes into use on rainy days during the recess periods as a general play room. It also finds a group enjoying it at noon and is a real source of pleasure during many of the evenings after school for those who live close to the building. The two shop rooms are used by seventh- and eighth-grade pupils two periods each day when instructors from the adjoining township high school come in. During this time the other teachers of these pupils are idle and their classrooms are vacant.

This consolidation has resulted in affording teachers of the several grade levels more time for instruction. It has reduced the number of teachers materially and has made possible certain enrichments for the pupils. Tradition, however, controls the situation. In the last analysis we have eight one-room rural schools grouped under one roof with but little advantage gained in community possibilities, curricular enrichments, and co-operative endeavor.

A More Successful Solution

In marked contrast to this consolidation is that which has taken place in Penn township. Here the general conditions were practically the same. Provision had to be made for about 300 pupils of grade levels one to eight. A township high school with an adequate plant was close by. About the same amount of money was available for construction and maintenance but those in charge of the consolidation were determined to bring about the greatest possible enrichment in the child's experiences and to meet the demand of present-day life in a more adequate way than they believed the scheme of consolidation exemplified above could. They felt that only by a different type of programming could they realize a greater return.

In the consolidation first illustrated the teacher is asked to teach language, reading, spelling, pen-

TABLE I—PROGRAM A

Period of Day

Nature of Work	*Room*	*I*	*II*	*III*	*IV*		*V*	*VI*	*VII*	*VIII*
Academic	a	1	2	1	2	N	1	2	1	2
Academic	b	3	4	3	4	O	3	4	3	4
Academic	c	5	6	5	6	O	5	6	5	6
Academic	d	7	8	7	8	N	7	8	7	8
Physical Training		6	5	8	7		2	1	4	3
Auditorium		4	3	2	1	P	6	5	8	7
Nature Study, Art, and Handwork	g	2	1	4	3	E	4	3	2	1
Boys' Shop	h	8	7	6	5	R	..	..	..	..
Girls' Shop—Elementary Science	i	8	7	6	5	I O D	8	7	6	5

manship, arithmetic, history, civics, geography, nature study, hygiene, physical training, art, music, expression, safety, thrift, to provide for and attend upon the auditorium period, and to supervise the playground—an impossible task for even the above average teacher. In the classroom we find that the teacher teaches the subject she most likes in a better way than the one in which she is not interested; that time and again if her choice is arithmetic, the arithmetic period will transgress upon the time of music; and that, if she were equally well-prepared and interested in all subjects, the very sameness of the new environment would defeat a realization of the desired outcomes.

Facilities to Meet the Objectives

To meet these objections an effort was made to set up a program that would provide for giving children experiences under the direction of teachers who are particularly interested and well-trained in directing those experiences; a program that would guarantee to each type of existence its proper amount of time; that would cause those experiences to occur in an environment conducive to their occurrence; and withal at no greater cost.

The following is the list of building facilities and their uses, which were provided in Penn township to meet the objectives set up: Four rooms for all academic work; one small gymnasium; one small auditorium for music and expression; one boys' shop for manual training; one girls' shop for cooking, sewing, and elementary science; and one room for nature study, handwork, and art, or nine units *in toto.*

Reduction in Units

In size the academic classrooms are the same as in the first school; the auditorium and gymnasium are each equivalent to two classrooms; while the shops and the laboratory are about fifty per cent larger than the regular classrooms. Compared with the school first illustrated the building requirements have been reduced from twelve units to nine, a material saving has been effected in the size of the auditorium, and even with these savings the plant is not being used to full capacity.

In providing instructors for this program the following were assigned: Four teachers of all

TABLE II—PROGRAM B, A PARTIALLY DEPARTMENTALIZED PROGRAM

Period of Day

Nature of Work	*Room*	*I*	*II*	*III*		*IV*	*V*	*VI*
Grade One	a	1	1	1	N	1	1	1
Grade Two	b	2	2	2	O	2	2	2
Academic	c	3	4	3	O	4	3	4
Academic	d	5	6	5	N	6	5	6
Academic	e	7	8	7		8	7	8
Physical Training		6	3	4	H	5	8	7
Auditorium		4	5	8	O	7	6	3
Boys' Shop	h	8	7	6	U	..	..	..
Girls' Shop—Elementary Science	i	8	7	6	R	3	4	5

academic work; one teacher of physical education, hygiene, and supervision of the playground; one teacher of expression and music; one teacher of nature study, handwork, and art; one-half teacher of boys' shop; and one teacher of girls' shop and elementary science, or eight and one-half teachers.

This program is handled with no more teachers than the previous one and yet each teacher because of specialization and environment can come more nearly to giving the children the experiences needed for their proper growth. As in the previous arrangement it is necessary to bring in a shop instructor from the adjoining high school but in this case only one instead of two.

The real test of the program is found in the activities of the pupils. In this case the school was divided as was the other into eight groups, assigning a grade level to each group. The day was divided in eight periods. In any one day a pupil in the third grade (Group No. 3 in Program A) has the following assignment: Four nonconsecutive periods for academic work; one period for music and expression; one period for physical education, hygiene, and supervised play; one period for nature study; and one period for art or handwork, making an eight-period day.

The Actual Program

In the seventh grade, to illustrate further, the program would be the same except that elementary science would displace nature study and the girls would go to the girls' shop and the boys to the boys' shop instead of to art or handwork. The actual program used in the administration of this building is illustrated in Table I. The figure 1 in the program refers to the first grade; the figure 2 to the second grade, etc.

The advantages of Program A are as follows: (1) The pupil's program is materially enriched; (2) each activity gets a fair proportion of time; (3) academic subjects receive as much time as previously; (4) teachers teach those subjects for which they are best prepared; (5) rooms are specially equipped; (6) the program is very flexible so that if in the special activities any subject other than auditorium, for example, is preferred to auditorium it may displace auditorium; (7) the program is so flexible that promotions in the upper grades may be by subjects and that individual differences in nature of activities assigned may be met; and (8) there has been no increase in cost.

Other Programs

The program used in this building (Program A) is but one of many that might be used to bring about greater returns. To illustrate a few others under different conditions and to set up certain general principles of procedure the following may be of interest.

There are those to whom Program A may prove very objectionable because they believe that departmentalization should not be introduced in the lower grades. To the best of our knowledge no school that has sincerely given such departmentalization a fair trial has gone back to a conventional type of program but it is possible to operate a rather advantageous program in this same building with the same number of pupils and not departmentalize the first two grades. A six-period day operates best in this case. Program B in Table II illustrates the necessary organization.

It becomes very evident that our offerings under this program cannot be as liberal as in Program A. In the afternoon the girls' shop teacher is assigned pupils in the third, fourth, and fifth grades. Here she teaches nature study for a certain number of weeks, and handwork for certain other weeks.

Program A is applicable to any school with classes in multiples of four; as four, eight, twelve, sixteen, twenty, or twenty-four classes. As the

TABLE III—PROGRAM C, ONE TYPE FOR A FOUR-ROOM SCHOOL

		Period of Day								
Nature of Work	*Room*	*I*	*II*	*III*	*IV*		*V*	*VI*	*VII*	*VIII*
Academic	a	1	2	1	2	N	1	2	1	2
Academic	b	3	4	3	4	O	3	4	3	4
Nature Study	(c	2	1	4	3	O	..	..	..	..
Handwork	(c	..	..	..	..	N	2	1	4	3
Music	(d	4	3	2	1	H	..	..	..	..
Physical Education and Hygiene	(d	..	..	..	..	O U R	4	3	2	1

TABLE IV—PROGRAM D, FOR A SIX-ROOM SCHOOL

Nature of Work	*Room*	*Period of Day* I	II	III		IV	V	VI
Academic	a	1	2	1	N	2	1	2
Academic	b	3	4	3	O	4	3	4
Academic	c	5	6	5	O	6	5	6
Physical Training		4	1	2	N	3	6	5
Special		2[1]	3[2]	4[2]	H	1[1]	2[2]	1[2]
Special		6[2]	5[1]	6[2]	O U R	5[2]	4[1]	3[1]

[1] Auditorium and Music.
[2] Nature Study and Art.

school increases in size, so may the number of enrichments be increased.

A four-room building without an auditorium or gymnasium may gain rather decidedly in making enrichments possible. Instead of four academic rooms and four academic teachers we would employ two academic teachers, one teacher of nature study and handwork, and one teacher of music and physical education. We would use two rooms for academic work only. We would equip one room for nature study and handwork. We would place a small stage in the fourth room and have movable chairs in this room. In this way it would serve a dual capacity as auditorium and gymnasium. Program C in Table III illustrates one type of program that might be used in a four-room school.

In the forenoon room c is used for nature study; in the afternoon, for handwork. Room d serves as a music room in the forenoon and in the afternoon becomes a playroom-gymnasium when weather conditions compel indoor activities.

To illustrate what may be done in a six-room building Program D is set up. The previous program included six classrooms, six academic teachers, no auditorium, and no gymnasium, while the enriched program includes six classrooms—three academic, one for auditorium, one for nature study and art, and one for gymnasium—and six teachers—three academic, one for music and expression, one for nature study and art, and one for physical education and play.

To seat pupils most advantageously the auditorium-music teacher exchanges rooms with the nature study-art teacher. Thus all of the smaller pupils use the room with the smaller seats for two activities and the larger pupils the one with the larger seats.

Applicable to Multiples of Three

This type of program with its six periods is best applicable to any school with classes in even multiples of three, as six, twelve, eighteen, or twenty-four classes. As the school increases in size so may the number of enrichments be increased: As for example, a library room, an expression room, an elementary science room, etc.

If the school already has a gymnasium and an

FORMULA FOR DETERMINING NEEDS

For any school with X classes. (Multiple of four).

$\frac{X}{2}$ = Total number of academic classrooms required.

$\frac{X}{4}$ = Total number of special classrooms required.[1]

$\frac{X}{8}$ = Number of classes in auditorium at one time.

$\frac{X}{8}$ = Number of classes in gymnasium and on playgrounds at one time.

[1] When a class is divided into two groups, one being assigned to the boys' shop and one to the girls' shop, two special rooms are required instead of one in each instance of such division.

FORMULA FOR DETERMINING NEEDS

For any school with Y classes. Even multiple of 3).[1]

$\frac{Y}{2}$ = Total number of academic classrooms required.

$\frac{Y}{6}$ = Total number of special classrooms required.

$\frac{Y}{6}$ = Number of classes in auditorium at one time.

$\frac{Y}{6}$ = Number of classes in gymnasium and on the playground at one time.

[1] When classes occur in odd multiples of three it will be necessary to have a teacher give half-time to academic work and half-time to special work.

auditorium not being simultaneously used with all classrooms, then there may be a gain in housing facilities. As the school increases in size we may make even greater gains in housing facilities if we are willing to assign two, three, or four groups to the gymnasium and auditorium at any one time.

With reference to all the programs, the following is to be noted:

1. In any of the programs any length of period or school day may be applied.

2. Any other activity may be substituted for an activity now listed. For example, if the auditorium period is not desired, the room may be used for library, music, or expression, etc.

3. Increase in capacity depends upon: (a) The relative amount of gymnasium, auditorium, and special classroom space that is used simultaneously with the regular classrooms; (b) the number of classes assigned the gymnasium and auditorium at any one period. This also may tend to decrease the number of teachers needed.

Certain Basal Factors

In introducing the type of organization making possible such enrichments there are certain factors that seem more or less basal. In part these may be listed:

1. That there is a legitimate demand for an enriched curriculum.

2. That in many cases much is to be gained merely through program making.

3. That as one enrichment after another is added to the curriculum there must be provision made for these enrichments to function, both as to time and place. Adding them within the same time limit to an already overcrowded program and in an environment not adapted to their functioning not only defeats their purpose but interferes with the entire program.

4. That the school day should be lengthened, not for operation of program but to provide time for added enrichments.

5. That adequate facilities must be provided.

6. That in the matter of making the first program for the introduction of the enriched opportunities the following observations may be practical:

(a) It is not necessary to have pupils begin or end their work at different hours.

(b) All pupils should have a luncheon arrangement as previously.

(c) Small centers should be used first, gradually programming the larger centers on the new basis.

(d) The initial program should be simple, with fewest possible number of shifts.

(e) The justification is to be found primarily in the enriched opportunities afforded the pupil, and secondarily, in the increased housing capacity of the plant and its greater utilization.

The Need of Research Bureaus

The first step toward making any commercial or industrial concern more efficient is for the owner, or the board of directors and manager, to obtain accurate and ample information regarding every phase of the enterprise, whether it be a village grocery store or a metropolitan department store, a street railway, or a transcontinental system.

There are, however, many persons who, while agreeing with the foregoing statement, do not realize that boards of education and superintendents of schools should be equally supplied with facts regarding the schools that they administer. Often mere opinion is the only basis for the action of boards of education and school executives, but mere opinion does not play as prominent a part as it once did.

School people are becoming more scientific in their study of school problems. Boards of education, composed of men and women accustomed to dealing with data, no longer listen with rapt attention to the orations of superintendents, but ply them with questions regarding the most successful practices in educational administration.

In fact, the modern school superintendent is unwilling to go before his board of education without facts to support any proposal that he may make. Not being content to rely upon guess work, superintendents in many cities have had research bureaus established to collect and compile data regarding various phases of their respective school systems.

Takes Steps to Secure Information

Every progressive school superintendent, even if he has no regularly organized research department, is attacking his problem in a scientific manner by having the supervisors, principals, and teachers prepare data for his guidance. He is in some way securing the necessary information.

Research bureaus should be the means of helping eliminate waste of all kinds within the schools and of pointing the way to more efficient school systems. However, the board of education that organizes a research bureau with the expectation of helping to reduce the tax rate may be disappointed. Such bureaus will no doubt find where funds may be saved, and again it may find that some phases of the school work are inefficient because of insufficient financial support.

The Proper Use of Color in the Schoolroom

A few facts on ideal wall finishes and hues for the schoolroom and a discussion of the use of color as a force in the creation of proper environment

BY FABER BIRREN, CHICAGO

COLOR is more than a decoration. It serves a larger purpose than beauty, or conformity to esthetic standards. Color, as a force, influences the mind as well as the eye. It has a psychological side as well as a visual, and a successful application of it—especially in the schoolroom—demands some attention to its various emotional demonstrations.

The use of color in the schoolroom can be generally summed up as serving five purposes: (1) It must help to destroy the "institutional" associations in the pupil mind; (2) it must lend relief from monotony, and aid concentration; (3) it must promote classroom visibility; (4) it must help to develop an appreciation of environment; and (5) it must provide durability and sanitation as a surface covering.

A primary endeavor in the school field has been to fight against a traditional dislike by the child of the "whole school idea!" Educational methods have progressed with admirable effectiveness in combating this aversion by inaugurating interesting methods of instruction. The school building itself has undergone huge physical changes. Choice architectural exteriors, attractive grounds, colorful corridors, rooms, study halls, have been designed with the excellent purpose of exemplifying a more friendly "humanness." Color here has been put to good use. It has added its powers of brilliance and charm to good effect.

The influence of environment has been studied with care. Concentration is difficult in a room that presents white, relentless walls. Color is softer. It relieves tension and depression. It is a definite aid to study and mental alertness.

Thirdly, color serves a purpose equal to white or gray in promoting classroom visibility. It has high reflective powers in certain intensities and values.

Color has an educational use. It is helpful in creating an appreciation of the esthetic side of life. It furthers the efforts of the school in instilling into the pupil mind, proper ideas of physical environment.

Lastly, color must offer a permanent, sanitary surface to the walls and furnishings of the rooms. It must be applied with attention paid to its durability as a pigment. Here must be considerations of paints, calcimines, materials, textures, finishes, and the like.

The "trick" of good color application, having in mind a desire to achieve more than mere decoration, lies in an immediate establishment of the effect to be attained. In other words, shall the room be active or passive, warm or cool? First of all, it is a known fact that the warm hues—red, orange, and yellow—are aggressive, vital, active.

The Limitations of Color

RED: Generally a poor color for wall finishes. In purity it is over-strong, and in tints, anemic. However, it may be used in full purity as an incidental touch. In small areas it has excellent appeal.

Orange: A good hue in tints for the wall. It is rather strong in warmth and should be used with this in mind.

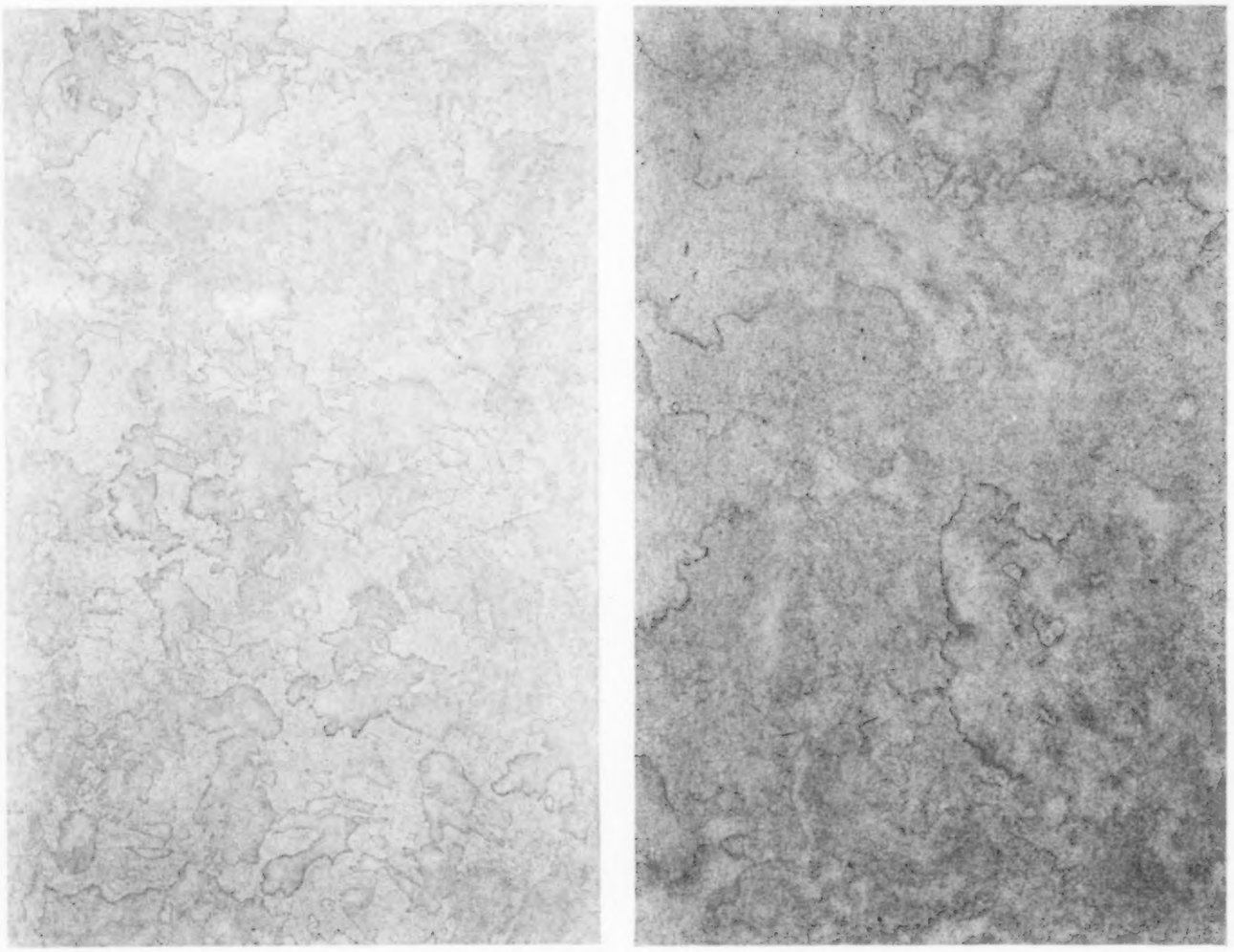
Yellow: Also a good hue. It has high reflective powers and is not greatly exciting in stimulation.

Green: One of the best colors for wall finishes. It is cool, clear, and pleasing—preferably when bluish in tone.

Blue: A hue that should be avoided in full intensity. Its coldness is depressing. However, when tinted it is somewhat interesting and can be mingled to advantage with green or violet.

Violet: Another hue to be avoided in full intensity. Its tints are good and serve a purpose as second color for mingled effects.

Gray: There is no emotional appeal in gray. It is passive and monotonous and should never be used unless considerably tinted with some hue to offset its lack of personality.



Examples of the mottled (left) and crumpled roll (right) finishes—economical and attractive surfaces for a good application of color.

The cold hues—blue and green—are the opposite, passive in association and stimulation. The choice will depend upon the ultimate environment in which the color will be placed to function.

Shall the colors be bright or subdued? That is ever a problem, complicated in a large measure by misconceived notions and poor logic. Color must have a certain amount of purity and strength. It has little, if any, emotional appeal when its intensity is modified to a degree of severe neutrality. The main trouble has been that the great over-stimulation of pure color in large areas has resulted in the belief that tints are necessary, and that purity is a form of esthetic barbarity. Yet, a person can walk amidst nature in its brightest season, view a sunset, and feel anything but depression. Color is not at fault. It is the application that sins.

Color must have some strength. And above all, it must have diversity. Plain, flat surfaces are monotonous, whether colorful or colorless. The classroom should not be drab, devoid of interest. Yet, color should not be too brilliant, nor should it be too flat, in large areas. There is little more distressing to the eye than a constant visualization of blankness, no matter what the character of that blankness may be.

This leads to the selection of a texture and finish for color that can suitably be employed. The mottled, and crumpled roll finishes illustrated provide a happy solution. Walls treated in this manner are pleasing to the eye, offering an unconventional variety that gives mild relief. Such effects eliminate entirely the monotony of plainness that is so fatiguing in the sense of vision. Mottled finishes are to-day universally used and understood. They are quickly and cheaply accomplished by almost every painter and decorator. Sponges and crumpled newspapers are the simple tools required in many instances.

With such effects as these, the individuality of nature—its pleasant variety of form and tone—is satisfactorily duplicated. No patterns are visible that detract because of stiff regularity. No monotonous, large wall areas give the feeling of coldness and austerity. Here is achieved a method

of application that is inexpensive and well suited to the inclusion of color—brighter color than would be possible with the flat, unrelieved surface.

With an adaptable texture established, the actual selection of color is the final step. Color mixture and color harmony have always been the subject of large debate. Yet, harmony itself should not be the ultimate goal. Primarily, the use of color should be guided by thoughtful consideration of the atmosphere or general stimulation that is the objective of the application. Harmony is more or less secondary. Sole attention to it is likely to result in a compromise of color force.

A simple rule is to make the room of north exposure warm, and the room of south exposure cool. An ideal wall color combination for warmth is to make the background a soft yellow (approximately goldenrod in hue, but not as brilliant) and as a second tint to use a pale, cool green. If a third color is desired, a pale orange could be added. However, the two tints, yellow and green, would be sufficient for good effect. With the crumpled roll finish, yellow could be the background and the green applied and daubed while wet to permit the ground yellow to show through.

The great advantage of this combination is that both hues are analogous and consequently harmonious. Secondly, yellow is warm, and green cool, although they both are adjacent. Thirdly, adjacents tend to lend vividness to each other. If hues of opposite visual characteristics are mingled, a muddy indefinite tone usually results. With yellow and green, however, a good clean surface is created that is pleasing to the eye, modified in its stimulation and fairly neutral without being drab. The visual appeal is evident without being disturbing.

For the cool wall surface a background of pale blue can take a pale violet for the crumpled roll second color. Here the cool blue background is given interest by the superimposition of a warm hue. Again, in this case analogous colors are employed that tend to intensify each other and not to conflict. The general effect is cool.

The error usually made in attempting mingled wall effects lies in a neglect to use adjacent hues.

Here is a corridor that has been made delightful through a pleasant agreement of color, surface, and architecture.

When they are not used many sad looking results occur. Opposite colors are not only disturbing to the eye, but they are almost impossible to juxtapose satisfactorily. Thus, the best plan to follow is to select the predominant hue and modify it with a hue that lies adjacent in the spectrum. Red, for example, should take orange or violet. Violet should take blue or red, etc.

The only limitation in this method of harmony is that a warm hue that has warm adjacents is likely to be over-atmospheric on the warm side. Likewise, a cold hue with cold adjacents may effect the other extreme. However, the yellow with green, and the blue with violet, discussed above, can be used together advantageously. One is slightly warm, the other slightly cool. Neither combination should be found unsatisfactory, as neither is extreme in stimulation.

Other combinations that offer good possibilities are pale orange with yellow, and green with blue. Of course, the procedure in applying any of these combinations can be reversed. That is, the background hue can change places with the hue used for the crumpled wall effect. By doing this a pleasant variety of wall finishes can be attained without requiring a great number of different pigments.

Touches of brilliant color can be added throughout the rooms. Stencil borders and designs lend interest and relief if they are judiciously and sparingly placed. Yet, the use of bright color should never be so strong as to throw the singular impression of the room off balance. The one impression effect should be maintained. The room should be either generally cool or generally warm, and the added touches of brilliant or complementary hues should be well confined.

The Use of Good Materials

This discussion has taken for granted that the pigments employed on walls are oil paints, not calcimines. The oil paint is sanitary and easily cleaned. Sometimes a coating of starch can be used to preserve the color. This coating can be washed off and then replaced during the cleaning season. As the starch will absorb the major grime and dirt, the clarity of the wall finish can be maintained and the basic background paint protected.

Dull finish pigments are superior to shiny pigments, as they tend to diffuse illumination and destroy direct reflections. Calcimine, perhaps, makes the best ceiling. Buff is a good hue, or a light neutral gray. The ceiling should, at its best, add to visibility. It should be light in value and have high reflective powers.

In corridors where occupancy is transient, more striking colors can be employed. Here it is not so necessary to design a moderate and subtle environment. Nor must the singular impression idea be essentially adhered to. The corridor should be bright and cheerful, and designed to kill all feeling of institutionalism. Its architecture as well as its hues should be appealing. And this applies generally to the entire building.

Color is important. Beyond its powers to aid concentration and to weave finer traditions about the school, it tends to instill in the pupil mind set ideas of cleanliness and order. Here its purpose is almost moral, as neatness, sanitation, beauty—so intimately associated with clean, pure color—are necessary ideals in the school curriculum. Furnishings, equipment, floors, shades, should be selected that are devoid of ugliness.

Some Points to Remember

As a summary of what color offers in schoolroom decoration, the following points should be kept in mind:

That a singular impression is best and should be based on an effort to attain one predominant effect. Conglomerate color combinations should be avoided.

That the room of south exposure can be made cool, and the room of north exposure warm. Yellow with green is ideal for the warm effect, blue with violet for the cool effect.

That adjacent colors are best for mingled combinations as they do not become somber when used together.

That touches of pure color are desirable.

That good materials should be employed that do not fade or deteriorate rapidly.

These, in effect, are the things to keep in mind for a proper application of color in the schoolroom. Careful attention to them will assure good results and desirable results.

In the main, a strict observance of rules of color harmony and color charts should be avoided. Most theories tend toward a compromise in color choice rather than an agreeable exploitation of color stimulation. Weak, anemic color schemes have no place in the schoolroom, regardless of any set ideas of styles or modes in interior decoration. Color is one factor in life that is entirely democratic and constant in its appeal. While architecture and design may undergo quick changes from time to time, color is ever the same, creating the same moods and reactions, and appealing alike to child and adult.

In the schoolroom more color and purer color should be used. Major thought should be given to effect, not to conformity. In other words, color should be employed for its emotional powers and because it is more than a decoration.

What City Schools Can Do to Aid Rural Schools*

Equalization of opportunity, a goal toward which we are all striving, will never be achieved until all school units work in co-operation

By MILTON C. POTTER, Superintendent of Schools, Milwaukee, Wis.

CONSIDERING society as an organism, it is meet we should consider the entire organism's needs and behavior, the interdependence and inter-relation of its parts. In looking at the educational organism it is proper that the needs and behavior of all its parts and specialized structures shall be considered with a view to securing the best possible inter-relation between those parts.

What the city unit can or does contribute to the country unit in no wise outweighs the country's contribution to the city. When well-directed, steadily supported, thoroughly modernized, and socially accepted, the country unit has every advantage over its city sister. Only as city-school conditions approach country-school possibilities can they become what all schools should be in a freedom loving land, where "equality of opportunity" is a slogan, if not a catch word. Given a garden, ample play space, a shelter-house, suitable work tools, and some of the play equipment a normal child demands, with a wise, kindly, cultivated, happy-hearted teacher, a school on a city square surrounded by high walls and busy streets of trade offers only a little of the blessedness of the country school.

Facilities in Cities

But the cities have the facilities for developing new methods, for building new courses of study. City developed methods and courses of study cannot be carried over into the rural schools *in toto*. Many of the ideas contained in them are applicable outside. To develop a new method of teaching or to construct courses of study as our best city schools are now doing is by no means a simple task. But city teachers, by pooling their efforts, one contributing a suggestion here, another there, have developed some rather remarkable curricula in recent years. These courses have not only been made but tried out in the classroom. A teacher working by herself for a lifetime could not develop all of the course of study material her school could well use, nor has she the opportunity for ample experimentation. Here is where she should be able to call upon the city for help, either directly as in the joint suburban conferences of Greater Detroit, or through her county superintendent, or through the office of the state superintendent, or the college of education of the university.

Country Will Pay for Education

The city unit to-day offers the country unit the service of a laboratory and experimental station. Urban communities have gradually come to believe in the efficacy of education, its value in habits and aptitudes, and are gradually reaching the point where they are willing to pay for it in dollars and cents. Society recognizes that its strength lies in well-trained, intelligent citizens. For this reason universal educational opportunity is provided at the expense of the whole community. Citizens face the fact that this is the only way they can contribute to the common good. There can be no isolation; standards of the metropolis must be met or outstripped by the environing groups. In view of current and probable annexations the metropolis should rejoice in the educational triumphs of its immediate hinterland.

This great middle west, and particularly the five states of the Northwest Territory, have embodied the thought of educational equalization in every enactment pertaining to public welfare. "Tithes of all we possess" have been given to education by our fathers. Education has been the one form of social service in which the pioneer farmers, the great railroad builders, the mighty lumber kings, and the hardy miners have stood together. As Minnesota's great university president declared last March at the Boston meeting:

"The state universities represent the culmination of democracy's effort to advance itself by

*Read before a meeting of the Department of Superintendence of the National Education Association, July 3, 1928, at Minneapolis.

education. They have thrived and flourished where democracy has thrived and flourished. Wholly unsympathetic with every attempt to transplant an alien university system to American soil, the great body of citizens in the Mississippi Valley, and later to the South and West, sought the establishment of institutions of higher learning, open to all, sensitive to public need, supported largely by taxes levied upon all, and designed and administered to promote the public welfare. The state universities and the public schools evolved out of the same set of conditions. The arguments for the establishment of the universities were essentially the same as those for the establishment of the public schools, only raised to a higher power. The public schools were intended to be free schools; the state universities were intended to be as nearly free as possible. The doors of the public schools were to be wide open; likewise the state universities were expected to admit those who had completed the work of the next lower unit of the public schools. The public schools were maintained to provide for each individual that training by which he could profit most; the state universities offered additional training for those who were capable of pursuing their studies into still higher realms. Both the public schools and the state universities were founded on the assumption that society's welfare is best promoted by providing as nearly free and equal educational opportunities and privileges as possible. Indeed from early colonial times this conception has been assumed to be one of the surest guarantees of civil liberty."

City Schools Are Prepared to Aid

It would seem that in the great growth of American cities, with even a share of the enormous funds required to carry on the work of government, our urban systems of education are prepared to serve as laboratory and experimental stations. They may and do demand the best of teachers, fitted by travel and other contacts to become exemplars of teacher craft. The city teacher's opportunities for organization, for training in service, and for increased participation in the work of the schools will make her competent. That the city may and does provide music and art, health and medical inspection, libraries and museums, Americanization and extension activities, and the increasingly important centers for the teaching of industrial crafts and homemaking are all worthy of rural and suburban study and emulation. County- and city-school fellowship should be cordial and two-sided. In Greater Milwaukee it is a normal-school supervisor who says:

"Our city school really helps the rural school with museum and library facilities. The supervisors of the city give a certain amount of expert advice to the country schools and occasionally give model lessons, not necessarily as they should be given in the rural schools but as inspiration or entertainment for rural-school teachers. When a boy, I remember the entire rural school that I attended visited a city school. My impressions of that visit still remain. Such visits might be an educational inspiration for rural-school pupils. There is also here rather a close touch between rural and city schools through committee conferences for working out co-operative projects, giving a better understanding of the environment of each."

Education Must Be Universal

We all profess to believe in democracy, equality of opportunity, the right of self-expression, the debt we owe to our forefathers, and the obligations that rest upon us as citizens and as members of present-day society. We are the fathers, the managers, the law-makers, the budget-makers, and the taxpayers of our time. Ours is the task so to train all the children of to-day that our beloved heritage may be safe in their hands a score or two of years from now. To that end there can be no difference made between rich or poor, black or white, the children whose playgrounds are city streets or those who live on country lanes. Education must be universal. To help make it more nearly so is the immediate task of the American city, for its own sake no less than the country's.

Opening to the children of the country all facilities of the municipality is one step in that project. Library, museum, parks, art galleries, and the concert hall are his now. Ease of travel makes these easily available. The radio and Uncle Sam's winged messengers keep him in touch with affairs. The city has a special duty toward the schools near her confines. She must accept cheerfully and freely their boys and girls into high and technical schools, thus making possible their entrance into college and universities. She must provide means by which their teachers may secure contacts with their professional city comrades.

The city terms should synchronize with country terms, with rural demands for the assistance of young people in farm house and field. The city can no better serve than to facilitate access of country youth to its own institutions, while health-giving labor out in the open might well claim many a city bred youngster and his care-frazzled mentor during the free term or "vaca-

tion." Country young people must be trained in the cities to go back into their communities with new respect for out-door toil, with added reverence for the men and women who till the soil, who win from Nature the life-giving fruits of strength and effort that come from Mother Earth. We will induce our city boys and girls to go out into the country from our teacher-training institutions for health and vigor, for release from distraction and nerve destroying amusements, that they may learn something in the country and later be able to teach something in the city.

Finally, urban communities owe financial aid to the country schools. But heretofore it has been generally assumed that help should come as a result of depriving city schools of money they need for themselves. A fundamental fallacy that has been current in educational and legislative administrative thinking is that the way to help the rural schools is to take money away from the city and give it to them. The fallacy lies in the assumption that city schools have more money than they need. Yet they challenge us to point out a city-school system that is really getting more money than it needs to operate good schools.

Cities everywhere are bemoaning the shortage of funds. In our own city of Milwaukee it has been a constant struggle to find means with which to keep a roof over the heads of our children. For a number of years we have had between three and four thousand children in barracks, with several thousand children on half-time and classes running with forty-five pupils per teacher. Yet the last Wisconsin legislature saw fit to enact legislation depriving Milwaukee children of $460,000 annually in order that the poorer districts of the state might be aided. Much of this will go to small schools with an average attendance of less than ten children per teacher as against our own average of forty-five.

Suggested Means of Assistance

By legislative fiat we are told that as a penalty for economy and efficiency we must give a half-million of our insufficient funds each year in the future to rural schools that have been so poorly managed as to permit schools to operate oftentimes with less than a half-dozen pupils. I do not mean to say that the rural districts do not need help; they do. Some of that assistance must come through greater efficiency in organization, to bring children together into more economical units and at the same time attract a higher class of teachers to the rural community.

But financial assistance must come in other ways than those proposed. If the great centers of wealth are to be taxed to support rural schools, tax those centers of wealth but do not take the revenue from the schools that happen to be located in those centers of wealth. The trouble with relief measures has been that they have proposed taking the monies away from our city schools. Why take from school revenues alone? Why not share the burden with roads, parks, streets, and other forms of municipal improvements? The immediate effect of the recent Wisconsin law is to decrease the millage for city schools. There is no increased burden on the taxpayer nor does any other governmental unit suffer except the public schools. If rural schools must be helped, why not propose a tax for that purpose specifically levied on all property of the state, in no wise affecting the present net income of the city schools? Let that issue be settled on its merits but do not attack the city-school funds.

The Superintendent's Tenure of Office

Only about fifty-three per cent of the cities having a population of 2,500 and over had the same superintendent of schools in 1927-28 as they had in 1922-23, according to W. S. Deffenbaugh. In some cities more than one change in superintendents occurred within the five-year period. Very rarely does a superintendent remain in the same position more than fifteen or twenty years.

Frequent changes in superintendents no doubt tend to lower the efficiency of a school system, since the superintendent who remains in a position but a few years cannot very well carry out any progressive program. He may get such a program started, but in case of change, the superintendent who succeeds him may not be able to take it up immediately. Before making any recommendations to the board of education, the new superintendent will find it necessary to make a careful study of conditions and to ascertain the policies of his predecessor to see whether such policies are sound and how they may best be carried out without making too many changes in them, all of which will mean delay.

From 1890 to 1926 enrollments in collegiate departments of colleges and universities increased 529 per cent. College enrollments have increased rather uniformly, excepting during the war period. In 1918 college enrollments suffered a material decrease. Increases in enrollments in teacher-training institutions show more fluctuation than in any other type of school. Part of this fluctuation may be charged to a reclassification of normal schools at different times.

The NATION'S SCHOOLS

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Editorials

Educational Jurisprudence

IN OUR modern school of commerce careful attention is given to a comprehensive study of commercial law and the use of the case method is almost universal. In the medical colleges courses in medical jurisprudence are common. The training of the agricultural expert, or of the engineer, is not considered complete without some organized instruction in law with especial emphasis upon contracts and statutory specifications regarding construction work. Yet how many of our colleges and schools of education offer courses dealing with principles of school law?

It certainly cannot be argued that such courses are unnecessary. As long as teachers, principals, and superintendents continue to have contracts with the majority of the nation's population in the administration of the nation's schools, it will certainly be advisable for them to understand the legal basis upon which their relations to the public must rest. When one considers that more than $6,000,000,000 is invested in property in the custody of school officials and that contracts of various kinds involving hundreds of millions of dollars are entered into annually, it becomes apparent that some systematic knowledge of the laws of contracts and property is desirable. This is particularly true in the case of those occupied with problems of school administration and school finance, which are becoming increasingly important duties of the city superintendent.

Legal Knowledge Necessary

There should also be some organized effort to provide more adequate information for those who deal with pupils and parents at first hand. As Judge Lyon has so aptly said in a well-known Wisconsin case: "Our system of public schools necessarily involves the most delicate relations between parents and children on the one hand and the school authorities on the other, and controversies growing out of the enforcement of school discipline must frequently arise." He adds that there is cause for congratulation that the number of such controversies is no larger than it is.

During the calendar year of 1927, fully 250 cases listed under school legislation involving more than double this number of separate points of law were passed upon by courts of last resort in our forty-eight states. This does not include the hundreds of cases in the lower courts. No one

will contend that a proper understanding of the rights of teachers, pupils, and parents, and the powers and duties of school officials, would not have greatly reduced the number.

It is true that in many states instruction in matters of statutory school law is given at teachers' meetings and in teacher-training institutions, but that is not sufficient. More emphasis should be placed upon the study of the fundamental principles of school law dealing specifically with the rights of teachers, pupils, and parents and with the law of property and contracts. That is essentially what is meant by educational jurisprudence. With this as a background, the more detailed points of the local state law of the public schools take on such additional meaning as will enable them to be understood and applied more intelligently.—*R. B. T.*

Mental Hygiene for the Teacher

DURING the last ten years, interest in mental hygiene for the young has increased amazingly. We are rapidly reaching the place where we will not explain a child's conduct as due to a perverted will. We are beginning to understand that causes of a physical or mental nature lie at the bottom of misbehavior of any sort. The treatment of problem children is different to-day from what it was two decades ago, when it was generally believed that the rod was a specific for all ills of temper or of character.

Most of the current discussion of mental hygiene relates to ways and means of preserving intellectual and emotional stability in childhood and youth. Not much has been said concerning mental hygiene for the teacher. But something needs to be said. Dr. Sadler pointed out recently that an unduly large proportion of the patients who came to him for restoration of nervous health are teachers. Why should the members of our profession become afflicted in larger proportion than the members of other professions with nervous and mental irregularity? First, because we worry more than they do. Our tenure of office is uncertain. Boards of education have a strangle hold on us. Our destiny is often determined by those who do not know much about us and who may be stacking the cards against us without our knowing it.

We have more critics than lawyers, doctors, engineers, chauffeurs, or clerks do. We serve a class of persons who find fault with us on slight pretext and who are inclined to take sides against us when a case of discipline arises. Anyone who has charge of children is certain to be scrutinized critically by the parents. Faults in the teacher are almost certain to be magnified greatly or even conceived *de novo* by the angered parent of a chastised pupil.

The public expects us to be models in appearance, propriety, and morals for the young people of the community. We can never quite forget that we are teachers. We cannot let down as other people do. We cannot laugh as boisterously, or play games as readily, or attend the theatre as unconcernedly, or dance as freely, or go automobiling as frequently or for the same purposes as other people do. This restriction in freedom of behavior causes many of us to retain outside of the schoolroom the tensions and repressions that life within the schoolroom develops in us.

Most of us suffer from an inferiority complex. We have heard that teaching is not on a par with other professions and we act the part. We have heard that people generally think that a teacher does not occupy an exalted position in comparison with the members of other professions. We take the matter to heart and this prevents us from relaxing when we are in the presence of our self-appraised superiors.

Any experience that leads one to become introverted or constrained, or self-conscious, or self-depreciative, will prove to be harmful mentally. In order that we as teachers may improve our mental hygiene, we must get rid of our worries, our tensions, our introversions, and our inferiority complexes. We cannot go on indefinitely maintaining a rigid, repressed, apprehensive attitude without coming to the end of the rope sooner or later.

Noise Slows Down Mental Work

A CERTAIN business establishment requiring the services of over a hundred clerks and stenographers has been investigating the effect of noise upon the accuracy and speed of their work. They have all been working in one large room. Sometimes there would be upwards of a hundred typewriters in action. Four years ago it was suggested to the manager that he would get better work from every employee if he would arrange it so that there would not be so much noise in the big room. He replied in substance, "It is a good thing for a girl to learn to concentrate. Anyone who can't come in here and do her work without paying attention to what others are doing isn't worth having. It is a good thing for anyone to have to cultivate concentration; he can work better when he is surrounded by noise if he learns to keep his attention on what he is doing than when he is in a quiet room."

The manager was dead wrong; and he has

finally come to his senses in regard to the matter. The firm was induced to try some experiments that showed greater accuracy and speed can be secured when workers are not bombarded with incessant noise. Comparatively noiseless devices have been installed by the manager above referred to; and nothing could induce him to reinstate the old noisy contrivances.

The results of recent experiments by Professor Laird are in line with the conclusions reached by those who have observed the effect of noise upon workers in any field, in the schoolroom or elsewhere. He has shown that the noises of the city interfere in some degree with the efficiency of workmen occupied in more or less crude muscular work. If a man engaged in welding iron bars, or in shoveling dirt out of a ditch, or anything of the kind, is slowed down in his work by raucous noises, how much more will those who are performing complicated mental tasks requiring prolonged concentrated attention be slowed down or disturbed in their work by noise?

We had an opportunity not long ago to observe the effect of noise on school children. In the city of Newark, a number of the school buildings are located on street corners in the noisiest section of the city. There is incessant racket from automobiles, heavy trucks, venders of fruit, and most of all by electric tramways. Even with the doors and windows closed, there is more or less din in almost every classroom in some of these schools. Although the pupils had become accustomed to the noise, it could be noted, nevertheless, that they were affected by the noise and were resisting it.

React to Noise Subconsciously

It is not a difficult matter to test the effect of noise in a psychological laboratory. A subject is engaged in familiar work in the laboratory and measurements are being made of his pulse beat, motor tension, accuracy, and speed. If the subject starts his work when the laboratory is quiet, and if later familiar noises made by janitor or machines are set going, it can be noted that the pulse is affected, motor tension is increased, accuracy in work is reduced, and the subject slows down generally. He may not be conscious of the noise, but nevertheless he reacts to it, so that there is set up in his organism a resistant or defensive attitude. The noise is harming him; and although he is not conscious of it, he tries to build a defense against it. When the experiment is over, he may not be able to recall what noises occurred during the test; but his responses showed clearly that he had been reacting resistantly to the noise.

Of course, people could not survive in these times unless they could develop a certain degree of immunity to noise. They could not accomplish very much mentally if they could not hold their attention upon the work in hand and resist distraction. But the fact that one must set up defense against noise in order to protect his attention from disturbance, shows that the organism is harmed by it to a certain degree.

Is the time approaching when much of the energy of pupils in school will be wasted in building resistance against the noises of city life?

N·S

Are We Developing a Peasant Class?

AN EXTENSIVE study of the intelligence and educational achievement of pupils in small towns and rural districts as compared with cities in the state of Mississippi revealed the fact that urban children were distinctly in advance of rural children. The state was divided into five sections on the basis principally of economic conditions, and it was found that the most prosperous section leads all the others, while the most impoverished section was far in the rear. This was true not only of educational advancement but of mental age and mental ability. Comparing children of the same chronological age in the country and in the cities, it was found that the latter were a number of points ahead of the former in intelligence quotient and in mental age. The same relationship was found to exist in educational age.

There can be no doubt that in this state, at any rate, those who live in urban communities make a better showing in every test of intelligence and educational advancement than do those who live in rural communities. The same relationship has been found to exist in other states, though data are not available on as comprehensive a scale as in Mississippi.

What may be happening in our country in respect to the development of a peasantry? Apparently those who are better endowed by nature are gathering in the cities where there are opportunities for financial gain and social pleasures, and leaving those who are not so well endowed in the country. It is possible that there is a process of selection going on that is sieving out the intellectually more capable people in the state and segregating them in the cities, where they are given superior educational opportunities compared with those that have been left behind in rural sections.

Adding nurture to nature in this way, we may be developing a class in urban centers that can exploit rural people because the latter are handi-

capped in every way in competition with the former. If this should go on for a few decades we could very easily establish a sharp distinction between the urban group and the rural group. What would happen would be that the former would become the favored class and would appropriate all advantages unto themselves—power, social prestige, wealth, comfort. This is just what has happened in European and Oriental countries.

It may be that there will always be a selective process going on that will tend to bring those who are better endowed into cities where there are greater opportunities for the exercise of their talents and the gratification of their desires. But we could counteract the tendency in our country if we do not want to encourage the development of classes along the lines that have been followed in older countries. We could build up the schools in rural sections so that country pupils could have all the advantages that city children possess. This is not the case now in most states; in some states a rural child is heavily handicapped in his education as compared with a city child, in respect to amount of schooling, the qualifications of teachers, educational equipment in school buildings, etc. Nothing can prevent our developing an inferior peasant class if this situation continues.

N·S

Learning or Learning and Doing?

A GREAT industrial leader was recently discussing problems of employment. Tens of thousands of persons of all ages and all degrees and types of education are at work in his establishment. He gave special attention in his address to the question of the attitude and usefulness of college graduates. He is trying out a good many of them in one or another department of his business. Some of them are making good, he said, while others will probably never achieve anything above very mediocre success.

"Why do college graduates so often fail in a business like the one I administer?" asked this captain of industry. He answered his own question, saying in effect, "A boy who has spent fifteen or sixteen years in school and in college and has never done any real work may never be able to learn how to do anything efficiently. I have young men in my establishment who secured good marks in college but they are making a very poor record with us. I do not charge them with negligence or indifference or laziness. The reason they are failing is because they have spent so many years merely learning out of books that now it is too late for them to learn how to deal effectively with realities.

"Some of these men I have working for me do not seem to know the difference between a real thing and a textbook theory or abstraction. I think most of these fellows would like to succeed but they deferred actual, first-hand contact with realities too long. I wish that every boy who is going on to college could stop after high school and do some real work for two or three years. Then he might enter college and he would probably get more help out of his courses than he could otherwise gain. After graduation he would have a better understanding of what is necessary in order to succeed in an industrial establishment than most of the men who go straight along in school for fifteen or sixteen years ever seem to acquire."

More Eager to Learn

There is a point here of great importance for those who determine educational policies. One who is familiar with the attitude and abilities of college students can confirm the statement that those who have been experienced with realities before coming to college are more eager than other students to gain mastery of the subjects they study so that they can utilize them. They manifest an interest in and capacity for making applications of what they learn to real problems in daily life much more generally than do students who have progressed from the kindergarten to the senior year of college without having been placed in any situations in which they were compelled to make use of the knowledge they had acquired in school.

It is hardly fair to any one who must make his way in the world after graduation to exclude him from contact with real situations until he is twenty-one or twenty-two. But by this time he gets so set in classroom ways of looking at the world that he finds it terrifying to face the actual world with its almost infinite complexity of problems that cannot be brought into a classroom for solution except in theory. When one spends his life from six to twenty-two adjusting himself mainly to book situations, his whole being becomes organized to continue to deal with this type of situation, and he has to begin *de novo* to acquire habits of mind and body that will make him efficient in dealing with objects and forces as contrasted with words and symbols. The latter never change their character, constitution, or function; the learner *thinks a change into them, so to speak.* Whatever change occurs in words or symbols must arise and run its course *in the learner's mind.* But objects and forces change on their own initiative and the learner must acquire a habit of mind of observing and manipu-

lating things that function without his causing them to do so.

The ideal way to weld the subjective and the objective worlds together would be for the learner to have experience with both of them continuously throughout his educational career. When he is learning the laws of physics, for instance, he should be in direct contact with physical realities, noting how they actually behave in response to the forces playing upon them and about them, and manipulating them with a view to determining what he can do with them and what they will do to him. When he is learning the laws of economics he should be placed in typical situations in which human beings are struggling for survival—for the increase of social, esthetic, and intellectual, as well as physical pleasure, and he should note how they adjust themselves to one another and what types of organization and group and individual behavior promote the well-being of all most enduringly and comprehensively. The principle is universal in its application and the embodiment of it in all the work of school and college is the problem of chief importance to-day in American education.

N·S

On Observing a Parasite's Mode of Life

CONSIDER the parasite: It sows not, neither does it reap, and note what happens to it. It selects a host, fastens itself thereupon, and proceeds thereafter to earn its living by proxy. The members it may have possessed at the time of adopting its parasitic program begin to atrophy and in due course disappear altogether. In the end there is nothing left of the creature but a formless mass without organs except those necessary to absorb nutriment from the host. The parasite has no need of organs because it does not have to struggle to maintain life. The host does all the struggling and the parasite derives the benefit thereof.

It appears to be true of all living things, that when organs are disused they become degenerate. The human body contains remnants of structures once functional but now atrophied because they are not needed for modern life. The human organism is now engaged in a dramatic contest to retain organs that until very recently have been essential for survival. Human teeth are scheduled for elimination. It is as though nature says: "You people do not use your teeth very much and why keep them. You can get along without them and I will get rid of everything that is not put to some use in maintaining life and in promoting well-being." She is getting rid of man's head covering, too, since there seems to be no real need for it under present-day conditions of life. Human muscle is declining except among the few who are engaged in heavy labor or who preserve their muscles by artificial exercise.

The entire human body is being reconstructed with a view to discarding or transforming organs that are not now functional and she may be strengthening organs that are needed for adjustment to the new order of things brought about by man's ingenuity in harnessing the forces of nature and making them serve us according to our needs.

Are Mental Organs Breaking Down?

What is happening to the human mind in consequence of the changing circumstances of life? What about children who are growing up in homes where everything is provided for them ready to hand? They do not have to use foresight in order to avoid distress and to augment comfortable and pleasurable experiences that yield lasting pleasure. They do not have real problems to solve. They do not suffer the consequences of failure to think straight and to act promptly and energetically in most of the situations in which they are placed. It is true that modern life requires a certain kind of alertness that was not required to such an extent in earlier times; but for a majority of children, probably, the fundamental problems that had to be solved by our predecessors are already solved for them. Choose one hundred children at random as they pass on the streets and it is probable that eighty of them have never been required to make plans and execute them so as to satisfy either physical or mental needs. They are, in a way, parasitic. What will happen to their mental organs if they do not have to use them in order to promote their welfare?

Have the schools kept pace with changing conditions so that they are now able to provide experiences for the young that will take the place of the experiences children of an earlier day had in every-day life? Are the schools placing children in real situations requiring the exercise of reason, of foresight, of ingenuity, of creative ability in order to avoid distress and to secure the things they enjoy and that are necessary for their welfare? If parents, teachers, and machines perform all the tasks that are necessary for a child's well-being so that he has but few real problems to solve, will he lose the mental powers with which he is endowed by heredity because the ancestors found them necessary for survival? Will resourcefulness, dynamic mental ability, foresight, reason, go the way the teeth and hair are going?

Your Every-day Problems

JOHN GUY FOWLKES, THE UNIVERSITY OF WISCONSIN, DIRECTOR

This department will be devoted to an informal discussion of problems arising in the every day life of principals and superintendents. The following are excerpts from letters that have been received recently by the director of this department. Similar inquiries are invited, and should be addressed to Dr. John Guy Fowlkes, Department of Education, University of Wisconsin, Madison, Wisconsin.

Financial Statements for Schools

Several inquiries have been received recently concerning financial statements. Such questions as type of financial statement that should be used, time of year financial statements should be prepared, and functions of financial statements have been raised. Financial statements for school systems may be divided into two general types, (1) budget statements, and (2) report statements. Intelligent use of such financial statements should be a part of every school administrator's program. The following suggestions concerning financial statements are based on practices in progressive school systems.

Obviously, budget statements are to be used in the development of budgets and should include data concerning a fiscal period of the past and also data concerning the present fiscal period. Budget statements fall into three general types: (1) Those that are to be used by some individual department, such as the department of industrial arts; (2) the budget statement that is to be submitted to the board of education, or other authorizing bodies, and that is based on the budget statements of the various divisions, such as the one to which reference has just been made; and (3) those statements that are to be presented to the general lay public, usually through the local newspaper, or to some specially selected group, such as Rotary, and other similar organizations.

Budget Statements

The budget of any organization is a financial plan for a fixed period of time showing amounts and sources of anticipated revenues and amounts and objects of proposed expenditures. Consequently, in preparing a school budget statement, great care should be exercised to include both receipts and expenditures. Budget statements should show immediately and clearly the source of school revenues and for what purposes such revenues are to be spent. The accompanying forms and those described in the columns should prove helpful to administrative officers concerned with budgetary procedure.

Budget Estimates of Receipts

In Form II, which is a budget statement to be submitted to the board of education or other authorizing body, and involves the budget estimates of receipts, columns are provided for the following entries: First column, Amount received, 1926-1927; second column, Amount received last year, 1927-1928; third column, Estimated receipts for next year, 1928-1929; and fourth column, Actual receipts, 19— - 19—. The following estimates are found in the form:

FORM A. RECEIPTS

1. General appropriations
   a. Federal and state sources
   b. County sources

   Specific appropriations

   Federal, state, and county
2. High school, junior high school, or graded school
3. Agriculture
4. Commercial department
5. Household arts
6. Industrial arts
7. Special children: Deaf, dumb, blind
8. Teachers' training and other special aid local revenue receipts
9. Local or district levy
10. Tuition for grades
11. Tuition for high school
12. Fees: Locker, semester, etc.
13. Net proceeds from sale of textbooks, supplies, etc.
14. Income from property or funds
15. Total revenue receipts

ACTIVITY_____ FIELD

Requirements	Spent	Original Allowance	Estimated Expenditure	Request	Increase over Estimated Expend. Amount	%
Tuition Fund						
Administration						
Principals	$.....	$.....	$.....	$.....	$.....	
Asst. Prin.	.....	.....	.....	.....	.....	
Teaching						
Regular teachers	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	
Substitute Service	.....	.....	.....	.....	.....	
Tuition - Sub-Total						
Contingent Fund						
Salaries	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	
Supplies	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	
Miscellaneous	.....	.....	.....	.....	.....	
Contingent - Sub-Total						
TOTAL						

Approximate Additional Amounts of Expense Which This Activity Incurs

Educational Admin.	$.....	$.....	$.....	$.....	$.....
Tuition Fund	.....	.....	.....	.....	.....
Contingent Fund	.....	.....	.....	.....	.....
Approximate Total Educational Dept.	$	$	$	$	$

Detailed Information Concerning This Activity

General Data					
No. of Schools	.....	.....	.....	.....	.....
Enrollment (at Date)	.....	.....	.....	.....	.....
Average Attendance	.....	.....	.....	.....	.....
No. Principals	.....	.....	.....	.....	.....
No. Asst. Principals	.....	.....	.....	.....	.....
No. Teachers	.....	.....	.....	.....	.....
Enrollment per teacher	.....	.....	.....	.....	.....
Ave. Salary of teacher	.....	.....	.....	.....	.....
No. of Clerks	.....	.....	.....	.....	.....

Cost per Pupil Enrolled

Supervision	.....	.....	.....	.....	.....
Administration (Field)	.....	.....	.....	.....	.....
Prin. & Asst. Prin.	.....	.....	.....	.....	.....
Clerks	.....	.....	.....	.....	.....
Teachers	.....	.....	.....	.....	.....
Supplies	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....
Miscellaneous	.....	.....	.....	.....	.....
Total Cost Instruction					
Educational Administra.					
Approx. Cost per Pupil Ed. Dept. Expenditures					

Signed _____

Form I, a budget statement of individual dep artments, as used in Cleveland public schools.

Nonrevenue receipts
16. Proceeds from bond sales and loans
17. Sales of property, etc.
18. Other nonrevenue receipts
19. Total nonrevenue receipts
20. Total receipts

Budget Estimates of Expenditures

In Form III, which involves the budget estimates of expenditures, columns are provided for the following entries: First column, Amount expended, 1926-1927; second column, Amount expended last year, 1927-1928; third column, Estimated expenditures for next year, 1928-1929; and fourth column, Amount appropriated for next year, 1928-1929. The following estimates are found in this form:

FORM C. GENERAL CONTROL

1. School elections and census
2. Salaries of board members, secretary, and assistants
3. Office supplies and expenses of secretary's office
4. Officers in charge of buildings, grounds, and supplies
5. Operation and maintenance of administration buildings
6. Other expenses of board of education
7. Salaries of superintendent, assistant superintendents, and office clerks
8. Superintendent's office supplies
9. Other expenses of superintendent's office
10. Other expenses of general control

Total expense of general control

FORM D. EXPENSES OF INSTRUCTION

1. Salaries of principals and supervisors
2. Principals' and supervisors' supplies
3. Other expenses of supervision
4. Teachers' salaries
5. Textbooks
6. General supplies
7. Supplies for special subjects
   a. Agriculture
   b. Commercial department
   c. Fine arts
   d. Household arts
   e. Industrial arts
   f. Library
   g. Physical education
8. Other expenses of instruction

Total expense of instruction

FORM E. CO-ORDINATE ACTIVITIES

1. Medical inspection
2. Dental inspection
3. Nurse service
4. Free lunches and milk service
5. Enforcement of attendance
6. Other co-ordinate activities
7. Total co-ordinate activities

FORM F. AUXILIARY AGENCIES

1. Libraries (public)
2. Transportation of children
3. Tuition, board, etc.
4. School lunches
5. Community activities
6. School gardens, etc.
7. Other auxiliary agencies
8. Total auxiliary agencies

FORM G. EXPENSES OF OPERATION OF SCHOOL PLANT

1. Wages of janitors
2. Janitors' supplies
3. Fuel
4. Water
5. Light and power
6. Other expenses of operation
7. Total expenses of operation

FORM H. MAINTENANCE, OR UPKEEP OF SCHOOL PLANT

1. Buildings and grounds
2. Repair and replacement of service systems

EDUCATIONAL LOAD OF_____

	1926-1927			*1927-1928*			*Estimated 1928-1929*		
	Grades			*Grades*			*Grades*		
	1-6	*7-9*	*10-12*	*1-6*	*7-9*	*10-12*	*1-6*	*7-9*	*10-12*
Census									
Enrollment									
Average Daily Attendance									

Form IV, for determining the educational load, as used in Cleveland schools.

3. Furniture and equipment
4. Other expenses of maintenance
5. Total expense of maintenance

FORM J. FIXED CHARGES

1. Rents
2. Insurance
3. Taxes
4. Contributions and contingencies
5. Teachers' retirement fund
6. Other fixed charges
7. Total fixed charges

FORM K. DEBT SERVICE

1. Payment of bonds direct
2. Redemption of short term loans
3. Warrants and orders of preceding years
4. Payments to sinking fund
5. Interest on bonds
6. Interest on short term loans
7. Other debt service; refunds, etc.
8. Total expense of debt service

FORM L. CAPITAL OUTLAY

1. Land
2. New buildings and grounds

Equipment of New Buildings and Grounds

3. Alteration of old buildings
4. New service systems
5. Furniture
6. Equipment for instruction
7. Other equipment

Equipment of Old Buildings and Grounds

8. Service systems, heating, lighting, etc.
9. Furniture
10. Instructional apparatus
11. Other equipment
12. All other capital outlay
13. Total expenditures for capital outlay

Report statements are statements that present data concerning some fiscal period that has been completed. As is the case with budget statements, report statements may be classified as (1) those that are to be used by some individual department, such as the department of industrial arts; (2) the report statement that is to be submitted to the board of education, or other authorizing bodies, and that is based on the report statements of the various divisions, such as the one to which reference has been made; and (3) those statements that are to be presented to the general lay public.

At present, in most school systems the finan-

FINANCIAL STATEMENT OF EXPENDITURES
FOR
SCHOOL DISTRICT NO. ——

City of _____

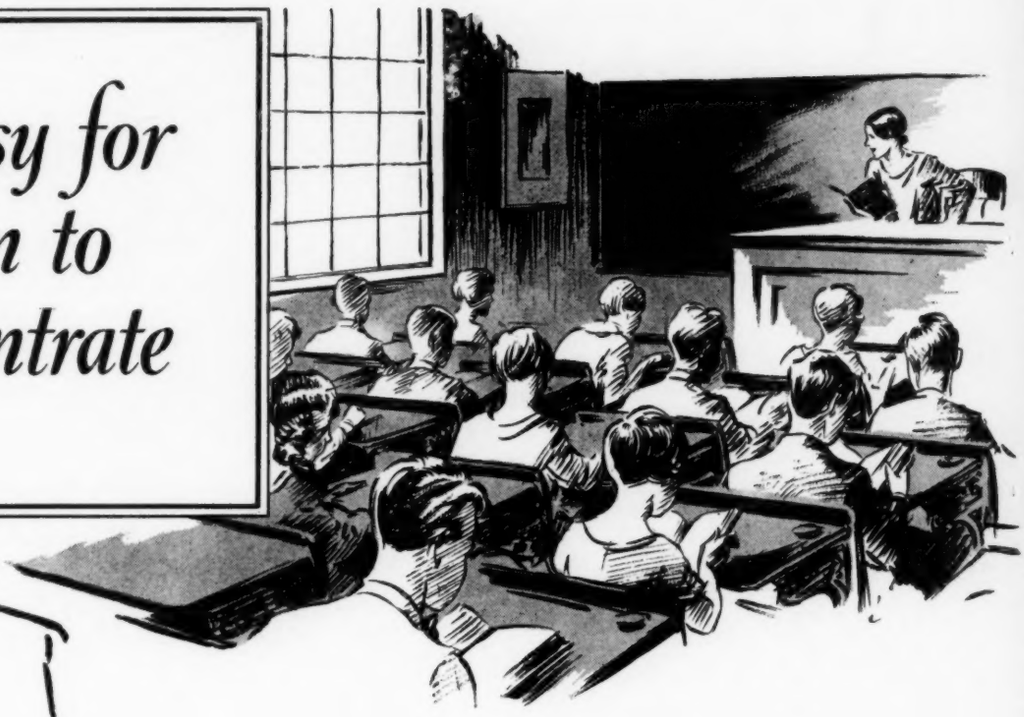
For the Month Ending _____ 192—

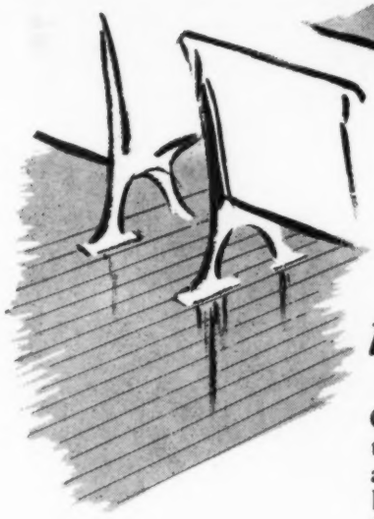
	Appropriated	*Total Amount for Current Month*	*Total Amount Expended to Date*	*Balance Not Expended*
C—General Control .				
D—Instruction				
E—Co-ordinate Activities				
F—Auxiliary Agencies				
G—Operation of School Plant ..				
H—Maintenance School Plant ..				
J—Fixed Charges ...				
K—Debt Service				
L—Capital Outlay ..				

Superintendent of Schools or Secretary of Board of Education

Form V, a financial statement of expenditures for school districts.

It's easy for them to concentrate





because the floor beneath their feet is warm, dry, resilient, clean

Cold, damp, rigid floors—what a toll they take in youthful health and mental efficiency! For how can boys and girls be at their best if feet are chilled and muscles tired—if "colds" and sickness are permitted to interrupt their regular routine?

Eliminate such conditions! Floor with the one flooring material that combines warm, dry, cushioning comfort with the qualities of lasting wear which school use demands. Northern Hard Maple!

This resilient flooring material is remarkably tough-fibred and tough-grained. It will not sliver or splinter. Scuffing, youthful feet and the moving of equipment simply make it smoother with time. Northern Hard Maple actually out-wears stone!

Maple, moreover, because of its permanent smoothness, is exceptionally easy to keep clean. It offers no open lodging places for dust and germ-laden dirt to collect. And it permits quick, simple, permanent anchorage for seats.

Hundreds of schoolboards have been guided by these facts in selecting flooring. They have chosen Maple for schoolrooms, corridors, gymnasiums, assembly halls. Consult your architect about Northern Hard Maple.

Your retail lumber dealer can furnish **MFMA** Maple, Beech or Birch flooring, or he can get it for you. Members of the Maple Flooring Manufacturers Association are:

Cobbs & Mitchell, Inc.	Cadillac, Mich.
Connor, R. Company	Marshfield, Wis.
Cummer-Diggins Company	Cadillac, Mich.
Flanner Company	Blackwell, Wis.
Foster-Latimer Lumber Co.	Mellen, Wis.
Holt Hardwood Company	Oconto, Wis.
Indiana Flooring Company, (Mill at Reed City, Mich.)	New York, N. Y.
Kneeland-Bigelow Company	Bay City, Mich.
Kneeland-McLurg Lumber Co.	Phillips, Wis.
Mitchell Brothers Company,	Cadillac, Mich.
Nichols & Cox Lumber Co.	Grand Rapids, Mich.
North Branch Flooring Co.	Chicago, Ill.
Northwestern Cooperage & Lumber Company	Gladstone, Mich.
Osgood & Blodgett Mfg. Co.	St. Paul, Minn.
Oval Wood Dish Corporation	Tupper Lake, N. Y.
Robbins Flooring Company	Rhinelander, Wis.
Sawyer Goodman Company	Marinette, Wis.
Soo Lumber Company	Glidden, Wis.
Stephenson, I. Co. Trustees	Wells, Mich.
Ward Brothers	Big Rapids, Mich
Wells, J. W. Lumber Company	Menominee, Mich.

Let our Service and Research Department assist you with your flooring problems. . . Write us.

MAPLE FLOORS IN COLOR—With fadeless penetrating stains recently developed, hard Maple Floors are now made to take a variety of beautiful, lasting color finishes—opening up entirely new possibilities for attractive decorative effects. Standard finishes made only by The Marietta Paint & Color Co., Marietta, Ohio, as follows:

EARLY AMERICAN	AUTUMN BROWN	DOVE GRAY	PASTEL GREEN	SEAL BLACK
SPANISH BROWN	SILVER GRAY	ROYAL BLUE	ORCHID	NATURAL

Write for free booklet, "The New Color Enchantment in Hard Maple Floors"

MAPLE FLOORING MANUFACTURERS ASSOCIATION
1797 McCormick Building, *Chicago, Illinois*

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The letters **MFMA** on Maple, Beech or Birch flooring signify that the flooring is standardized and guaranteed by the Maple Flooring Manufacturers Association, whose members must attain and maintain the highest standards of manufacture and adhere to manufacturing and grading rules which economically conserve these remarkable woods. This trade-mark is for your protection. Look for it on the flooring you use. **MFMA**

Floor *with* Maple

cial statements of individual departments do not receive the attention they deserve. The type of report statements found most commonly are monthly statements and yearly statements. One of the most important phases of the financial statement that is to be presented to the board is the monthly financial statement. Monthly financial statements bring the attention of the board to the school system and keep alive action that has been taken by that body at previous meetings. The yearly financial statement should be a report of receipts and expenditures of the previous year and is included in the budget statement forms I to IV. The accompanying monthly financial statement has proved helpful in many communities.

Statements for the Public

It has doubtless been observed that no reference has been made to financial statements that should be prepared for the public. As is true of all financial statements, it should be kept clearly in mind that such information is for the purpose of showing the causal relation between the educational load of the community, school receipts, and school expenditures. In presenting financial statements concerning the local school system to a lay public, it is necessary to interpret the financial statement in terms that are the every-day expression of the local school's constituency. Indeed, for purposes of popular presentation, a school budget may well be defined as the fiscal interpretation of a school's activities. For example, while it is probably best to include the classification "Instruction" in both budget and report statements, the classification should be explained in terms of teachers' salaries, pencils, paper, and textbooks, in order that the technical description may be interpreted in language familiar to all concerned.

Inadequate or imperfect systems of financial accounting have prevented the use of financial statements by many educational administrators. Financial data concerning a local school system can be available only after a sound scheme of financial accounting has been installed and maintained. The first basic considerations in a system of financial accounting for schools are the major or control accounts for distributing both receipts and expenditures. The following references will prove of assistance to those interested in checking or in revising their systems of financial accounting:

Case, Hiram C., *Handbook of Instructions for Recording Disbursements for School Purposes.* The University of the State of New York, Albany, N. Y., 1917.

Engelhardt and Von Borgersrode, *Accounting Procedure for School Systems.* Bureau of Publications, Teachers College, Columbia University, N. Y., 1927.

Fowlkes, John Guy, *Handbook of Financial Accounting for Schools.* Eau Claire Book and Stationery Company, Eau Claire, Wis., 1924.

Moehlman, A. B., *A Uniform Financial Procedure for the Public Schools of Michigan.* Bulletin No. 4, Part I, State Dept. of Education, Lansing, Mich., 1925.

Moehlman, A. B., *A Uniform Financial Accounting Procedure for School Districts of Michigan Having a Population of 2,000 or Less.* Bulletin No. 4, Part II, State Dept. of Michigan, Lansing, Mich., 1925.

State Institutions Aid Community Centers

Community centers, originally called social centers, are organizations designed to increase the number and effectiveness of activities that bring people of a district together. The ideal behind this movement is that of securing more co-operation among neighbors in the solution of community problems.

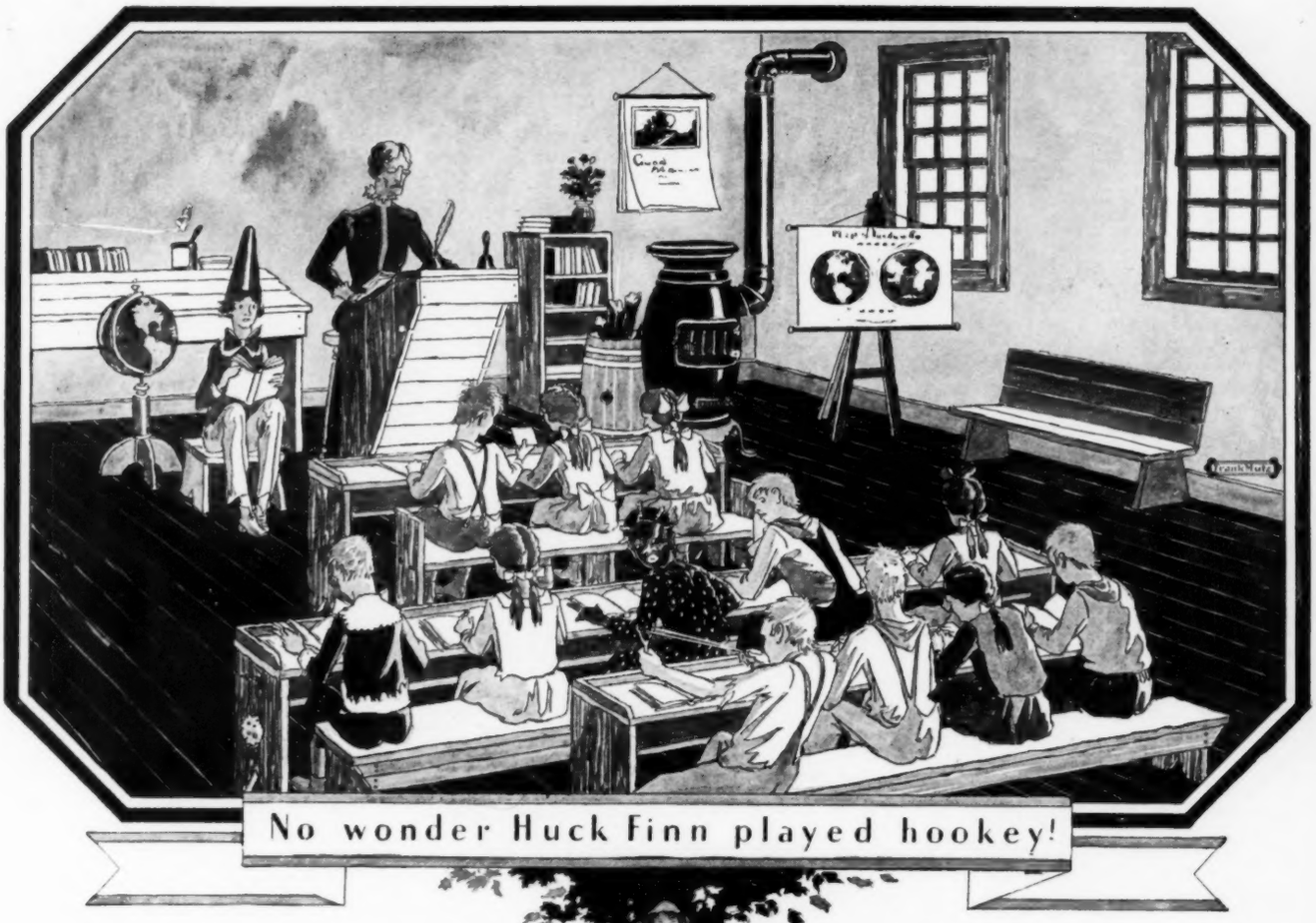
To serve teachers and different community centers, many of the extension divisions of state universities and colleges have provided specialists in public recreation and playground activities who give assistance and advice on these subjects. Help is also given in developing leaders in the various community centers of the state.

Further to aid the community centers, some of the extension divisions hold conferences and institutes; conduct investigations and surveys; and furnish programs and exhibits.

The University of Michigan Plan

Of special interest is the plan developed by the University of Michigan. The co-operative plan for community center service was started in 1923, at which time all the colleges and normal schools of the state entered into a tentative agreement with the state university, through its extension division, to give such assistance as might lie in the power of the various institutions to further community center service, particularly as related to small and outlying rural centers in Michigan.

The extension division of the university publishes and distributes each year a special bulletin in which are given directions for local committees with reference to the organization of community center service programs. The bulletin also contains the names of co-operating institutions, together with the names of the special chairmen who have charge of the work in the respective institutions. It is especially noteworthy that this type of service is the first of its kind in this country in which there is presented to the people of a state a co-operative service on the part of all the educational institutions of higher learning. It is believed that this type of service will prove of great value, especially to rural centers.



No wonder Huck Finn played hookey!

THINK for a moment of the discomforts and inconveniences of "school days"—when freckled Huck "used to go fishing instead." . . . Pot-bellied, wood-burner stoves . . . outhouses . . . nailed-down windows . . . old-fashioned tables and benches . . . noisy, cold and drafty floors. Not too inviting—*those* schoolrooms!

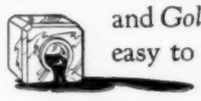
Today we have modern plumbing, scientific heating and ventilation, correct posture seats and desks . . . and BONDED FLOORS.

When modern resilient floors mean so very much to the health, comfort and peace of mind of students and teachers, why should *any* school have floors of the "Huck Finn" period?

BONDED FLOORS—with every modern advantage of quiet, comfort and easy-cleaning—may be installed right over the old floors, in most cases.

Do old-fashioned floors "date" *your* schoolrooms?

Then get the *facts* from the BONDED FLOORS COMPANY—learn how economical these resilient floors are. Learn too, about the wonderful Sealex Process which has made BONDED FLOORS of *Gold Seal* Battleship Linoleum and *Gold Seal* Jaspé Linoleum almost as easy to clean as glazed tile.



The effect of this exclusive process—unlike a mere surface coat or veneer—is to penetrate and seal every tiny pore of the linoleum, producing a unique, *soil-proof* superfinish which prevents the absorption of dirt and liquids. Ink or grease may be wiped up easily, with no harm to the floor.

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General Office: Kearny, N. J.
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BONDED FLOORS

Resilient Floors Backed ISSUED BY U.S. FIDELITY AND GUARANTY CO. *by a Guaranty Bond*

News of the Month

Urges Attention to Background in Making Surveys

More careful attention to the economic, geographical, and social background of colleges and universities, during the making of surveys of these institutions, is recommended by Dr. Arthur J. Klein, chief, division of higher education, Bureau of Education.

As an example of the value of studying such factors, Dr. Klein points to a survey recently made of the University of Porto Rico. The recommendations, he said, laid stress on the possibilities inherent in the university's location, "particularly its position midway between the two Americas and its consequent opportunity to promote cultural contacts between the two continents."

The survey of the University of Porto Rico recognizes clearly the relationship of these details to fundamental conditions and problems. It states:

"The university's past is now unimportant, except as a warning. Its present is clearly a stage of transition. Only its future is of real interest and significance to the people of Porto Rico. To analyze its present condition, with the fullness of detail that is common in studies of this character, would serve no useful purpose. For example, calculations of costs of instruction would mean little because they would necessarily be based on factors that will be radically changed within a year. Nevertheless, the commission is persuaded that some analysis by an outside agency of the fundamental operations of the university, some estimate of its equipment and personnel, and some definition of its major problems should be helpful to its officers in planning for the future. Such a study should also show the people of Porto Rico the disparity between the university they now have and a university that will perform the suggested services for the island."

Government Ship Making Annual Trip to Alaska

The Government is preparing to make its annual contact with teachers in Alaskan schools, the Department of the Interior has announced. The *U. S. S. Boxer*, operated by the Bureau of Education has sailed from Seattle, Wash., with supplies, communications, and relief instructors for the isolated villages in the Territory.

Those eighty school teachers scattered along the shores of Bering Sea and the Arctic Ocean to the continent's northernmost reach at Point Barrow and who supply the Government's only contact with most of its 12,000 Eskimo people are about to feel the single annual contact with the source of their authority in far away Washington.

The *Boxer* will have aboard a number of venturesome individuals who are bound for the Eskimo villages, there to replace other teachers whose terms of service have expired. These men and women will become the single link of most of these villages to civilized living. The *Boxer* will bring out the returning teachers of the North.

The *Boxer* will carry supplies to all those school stations of the far North. She will carry mail and reading matter to last another twelve months. In her cargo will be a number of radio sets that will receive the messages and the entertainment that are broadcast as far away as Chicago where life is different from that beyond Nome.

Special Funds Aid Harvard Students

More than a fourth of the entire student body at Harvard College received financial aid from special funds during the 1926-27 session. Of $200,200 disbursed from the funds, $129,500 was expended in scholarships and "aids" to 386 students; $61,300 in loans to 442 students; and $9,400 from beneficiary funds was issued to 109 students. It was stated that in the Graduate School of Liberal Arts and Sciences, scholarships and fellowships to the value of $71,225 were distributed to 145 students, and loans amounting to $8,159 were made to eighty-five students.

Elementary Schools Lag in Enrollment Increases

Increases in enrollments in elementary schools since 1890 have not kept pace with increases in the general population, according to Frank M. Phillips, chief, division of statistics, Bureau of Education. Enrollments in elementary schools increased sixty-three per cent in thirty-six years, while the general population increased eighty-seven per cent, he said.

The greatest increase is shown for secondary schools, he declared, the percentage of gain being 1,055. Enrollments in collegiate departments of colleges and universities increased 529 per cent from 1890 to 1926. A general gain in enrollments in public schools over those in private schools during those years is reported by Mr. Phillips.

Approximately 89 per cent of the enrollments included in the grand total enrollment in schools in the United States are in schools under public control. Since 1920, schools of higher education, including those for teacher training, show slight gains for schools under private control. The decrease in percentage enrollments in public schools for 1926 is perhaps due to better figures from private schools for 1926 than for previous years.

In 1890 the per cent of the whole population enrolled in public schools was 20.3 per cent, in 1926 it was 21.1 per cent. During this period the per cent of those enrolled who were in high schools increased from 1.6 per cent to 15.2 per cent. Increases in enrollments in elementary schools, therefore, have not kept pace with increases in the general population. The school population, those of ages five to seventeen, inclusive, increased sixty-two per cent during this same period.

DRESSER, DESK *and* NIGHT TABLE *from Simmons Suite No. 115.* CHAIRS *are from Suite No. 105. The* BED *is No. 1547*

Homelike bedrooms can be practical, *too*

IN KEEPING with the modern trend in school architecture and decoration, your dormitories and bedrooms may now include furniture that confers an atmosphere of homelike comfort, of warm, personal welcome.

Simmons steel furniture, in cheerful color combinations or in exact reproductions of fine hardwoods, enables you to carry out any decorative scheme you may be planning at no sacrifice of economy—easy maintenance and low upkeep costs.

Made of enduring metal, Simmons furniture is practically indestructible. No part can loosen, split nor warp. Neither stains nor burning cigarettes can ever mar its permanent, chip-proof finish. Years of hard, expense-free service are built into every Simmons piece.

A list of schools now using this modern equipment, together with catalogues and information, will be sent promptly at your request. Just write The Simmons Company, Contract Department, 666 Lake Shore Drive, Chicago.

SIMMONS

Beds · Springs · Mattresses

. . . BUILT *for* SLEEP . . .

News of the Month

Measure Pupils to Fit School Bus

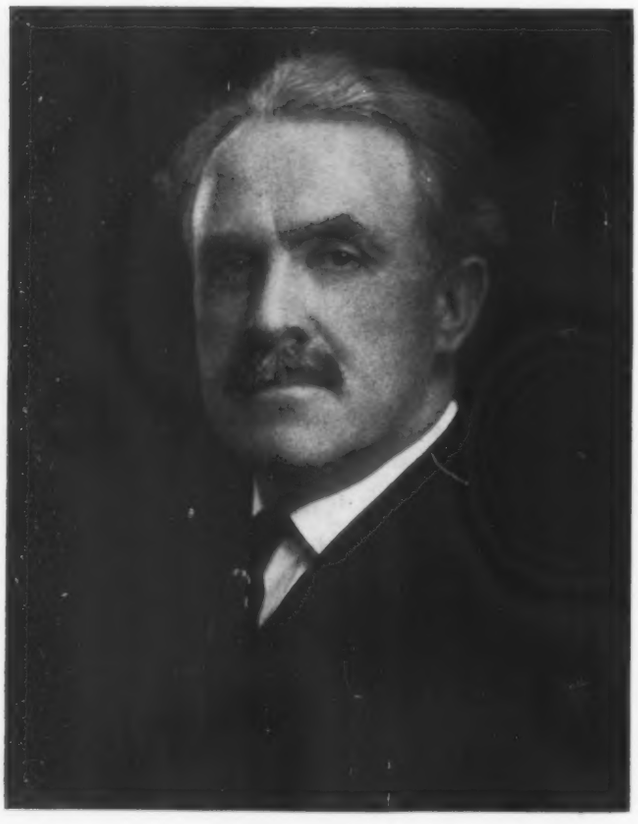
The shoulders of a five-year old child of average size should be ten and one-half inches across and the hips should be eight and three-quarters inches, according to investigations made by an automobile company manufacturing school busses. These investigations have provided data that have been incorporated into a sales manual that provides measurement charts for sizes of representative children of America. The number of children a school bus will carry depends on the ages of the class or classes to be carried.

Bogan Plans Advisory Board in Chicago

Closer relationship between the public and the school system, including an extension of adult education, through the aid of an advisory committee of civic leaders, will be promoted as one of the chief policies of William J. Bogan, who was appointed superintendent of schools, Chicago, to succeed William McAndrew, according to the announcement of his program for Chicago schools.

The policy, as outlined, contains the following major objectives: Expansion of the health program to insure every school child competent medical attention; creation of a community center in every school; initiation of an educational program that will reach children of school age not attending classes; improvement of recreational facilities; extension of the lecture system for the benefit of both adults and children; and a closer connection between the research departments of the several universities in Chicago and the public-school system.

This program was announced following a meeting with representatives of nineteen civic organizations he had called on for co-operation. This body will form the nucleus of the permanent advisory committee to be made up of fifty leaders interested in education who will aid the superintendent in carrying out his program.



William J. Bogan, superintendent of schools, Chicago, who succeeded William McAndrew.

Land-Grant College Survey Field Staff Membership Announced

The membership of the various field staffs in the land-grant college survey now being conducted by the Bureau of Education includes representatives in the fields of research, extension, home economics, and agriculture from thirty-six land-grant institutions located in all parts of the United States.

Headquarters of the members of the field staff are located at their local colleges, from which they will make trips to neighboring institutions to assist in the conduct of the survey in their particular fields.

The field staff on research includes: President R. W. Thatcher, Massachusetts Agricultural College, Amherst; Marion J. Funchess, dean of the College of Agriculture and director of experiment station of Alabama Polytechnic Institute, Auburn; James T. Jardine, director of experiment station of Oregon Agricultural College, Corvallis; Director L. E. Call, of the agricultural experiment station at Kansas State Agricultural College, Manhattan; Henry W. Barre, director of Connecticut Agricultural Experiment Station, New Haven; and W. C. Coffey, dean of the Department of Agriculture of University of Minnesota, University Farm, St. Paul.

The Field Staff on Extension

Members of the field staff on extension are: Thomas B. Symons, director of extension, University of Maryland, College Park; Milton S. McDowell, director of agricultural extension, Pennsylvania State College, State College; Harry C. Ramsower, director of extension, Ohio State University, Columbus; Luther N. Duncan, director of extension, Alabama Polytechnic Institute, Auburn; Paul V. Maris, director of extension service, Oregon Agricultural College, Corvallis; Pontus H. Ross, director of extension service, University of Arizona, Tucson; John R. Hutcheson, director of agricultural extension division, Virginia Polytechnic Institute, Blacksburg; Francis W. Peck, director of extension, University of Minnesota, University Farm, St. Paul; and A. J. Meyer, director of agricultural extension service, University of Missouri, Columbia.

The field staff on home economics is composed of Lita Bane, professor of home economics, University of Wis-

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The solution of your dishwashing problems is to standardize

Wyandotte
Cleans Clean
Sanitary Cleaner and Cleanser

for all your dishwashing, whether you are washing by machine or hand.

This pure, greaseless cleaner has a natural cleaning action. It cleans quickly, rinses freely, and leaves the natural surface of china, glass, and silverware free from streaks, faultlessly clean and pleasant to handle.

Ask your supply man for
"WYANDOTTE"

The J. B. Ford Co. Sole Mfrs. Wyandotte, Michigan

News of the Month

consin, Madison; Mary Creswell, director of home economics, Georgia State College of Agriculture, Athens; Mrs. Kathryn V. Burns, assistant professor of home economics and state leader of home economics extension, University of Illinois, Urbana; Nina B. Crigler, specialist in home economics, Bureau of Education, Washington, D. C.; Jean Krueger, dean, division of home economics, Michigan State College, East Lansing; Ava B. Milam, dean, school of home economics, Oregon State Agriculture College, Corvallis; Jessie Harris, head of the school of home economics, University of Tennessee, Knoxville; Dr. Margaret M. Justin, dean, division of home economics, Kansas State Agricultural College, Manhattan; and Martha Van Rensselear, director of New York College of Home Economics, Cornell University, Ithaca.

Agricultural Representatives

Field representatives on agriculture include the following: Dean E. J. Kyle, School of Agriculture, Agricultural and Mechanical College of Texas, College Station; John R. Fain, professor of agronomy, State College of Agriculture, Athens, Ga.; Thomas F. Tavernetti, assistant to the dean of the College of Agriculture, University of California, Berkeley; Dean Harlow L. Walster, School of Agriculture, North Dakota Agricultural College, Fargo; Merritt F. Miller, professor and chairman of department of soils, College of Agriculture, University of Missouri, Columbia; Walter L. Howard, Director of College of Agriculture, University of California, Berkeley; Dean William L. Machmer, Massachusetts Agricultural College, Amherst; Ralph L. Watts, dean of School of Agriculture and director of experiment station, Pennsylvania State College, State College; Edward C. Johnson, dean of College of Agriculture and director of experiment station, State College of Washington, Pullman; and Cornelius Betten, director of resident instruction of New York State College of Agriculture at Cornell University, Ithaca.

Rapid progress has been made in the preparation and distribution of the different questionnaires to be utilized in gathering data from the land-grant colleges. The selection of the field staffs is for the purpose of assisting in the institutions in furnishing this data and information. Members of these staffs have already started making field trips and visits to the institutions.

George King, clerk of the board of education, Salt Lake City, who was elected president of the National Association of Public-School Business Officials.

Printing Courses Available in 369 Institutions

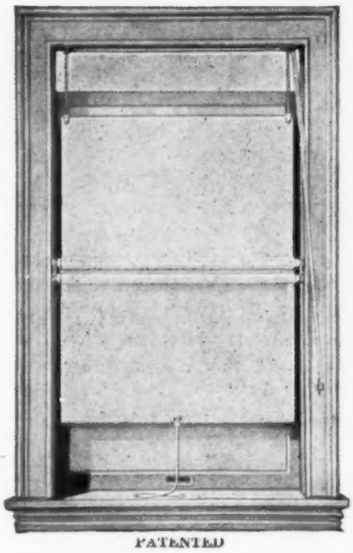
Courses in printing may be obtained in 369 institutions in the United States and Canada. During 1926-27 there were 28,537 students enrolled in such courses under the instruction of 443 teachers, according to a survey by the United Typothetae of America.

Of the institutions in which printing courses are offered, the largest number, eighty-eight, are academic high schools; eighty-six are junior high schools; twenty-two are technical high schools; forty-four are trade or vocational schools; and thirty-one are evening schools. Nine are colleges or normal schools; ten are "plant" schools; twenty-nine are elementary schools; and seventeen each are continuation and part-time schools.

The time devoted to the subject varies from one to forty-eight hours per week, and from five weeks to six years. The age range of pupils in elementary schools is from eleven to sixteen years, and of students in other institutions and schools, the general range is from twelve to eighteen, although many students up to the age of thirty and even sixty years of age are enrolled in such schools. Equipment to the value of $3,316,960 is available for use.

Public Education Legislation in Guatemala

Public education in Guatemala will be promoted by legislation recently enacted that includes, among other important measures, prohibition of work during school hours by children of school age, and the requirement that owners of farms, mines, factories, or other business enterprises in rural sections shall maintain schools at their own expense if as many as ten children are without educational opportunities. A scholarship for a complete course in government schools shall be available for at least one child of any parent who has taught more than ten years in government schools. Schools receiving government aid will hereafter be secular.



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News of the Month

Distribute Questionnaires in Land-Grant College Survey

The survey of land-grant colleges in the United States, which is being conducted by the Bureau of Education, is "progressing rapidly," according to Dr. A. J. Klein, director of the survey.

The study of the "human product" of the land-grant colleges promises to reach considerable size, he said. A total of 150,000 copies of a questionnaire for graduates and ex-students has been mailed to thirty-four institutions that submitted estimates of the number required. The University of Wisconsin asked for the largest quantity, 31,000, while the University of Minnesota is next in order with 15,000 copies. Estimates of the Oregon Agricultural College and Kansas State Agricultural College total 6,000 each, while other land-grant colleges submitted estimates varying from 2,000 for the smaller to 5,500 for the larger institutions.

The questionnaire on control and finance has been prepared, reproduced, and distributed to the institutions.

Carl E. Steeb, business manager of Ohio State University, and D. W. Springer, secretary of the Association of Governing Boards of State Universities and Allied Institutions, are largely responsible for its preparation. Before its final adoption, the questionnaire was reviewed by the advisory committee on the financial aspect of the study.

This committee includes Robert G. Sproul, vice president, comptroller, and secretary of the regents of the University of California; Fay E. Smith, secretary of the board of trustees of the University of Wyoming; Alfred S. Brower, comptroller of North Carolina State College of Agriculture and Engineering; Robert L. Himes, business manager of Louisiana State University and Agricultural and Mechanical College; and Charles H. Gorman, comptroller of the University of Nevada.

In addition the questionnaire was reviewed by the advisory committee representing the governing boards of the colleges composed of the following members: John Callahan, regent, University of Wisconsin; Junius E. Beal, regent, University of Michigan; William S. Myers, trustee, Rutgers University; David E. Ross, Purdue University; and Alma W. Paterson, trustee, Ohio State University.

Department of Labor Studies Retirement Systems

Twenty-one systems of retirement of teachers and seven city systems independent of the state were found to exist, in a recent investigation by the Department of Labor.

Most of the systems, according to the report, whether of state or city, limit membership to teachers, usually including superintendents and similar officials. New Jersey and Pennsylvania include other employees of the school system, such as janitors and engineers. Maryland has just made a complete change, substituting for its earlier partial system, an actuarial reserve plan.

The report says that employees generally share in the management of the retirement systems, but in five systems the employees have nonrepresentation on the administrative body. In Rhode Island the state provides all the pension funds, while two states add nothing to the teachers' contributions.

The following table shows the date of establishment and the approximate membership of the systems included, while the figures in parentheses indicate the year of the change in system:

	Year established	*Membership*
State systems:		
California	1913	36,108
Connecticut	1917	9,749
Illinois	1915	38,888
Indiana	1915 (1921)	12,341
Maryland	1927	.....
Massachusetts	1914	20,019
Michigan	1917	24,471
Minnesota	1915	16,866
Montana	1915	5,600
New Jersey	1903 (1919)	19,830
New York	1921	39,648
North Dakota	1913	8,226
Ohio	1920	42,972
Pennsylvania	1921	58,409
Rhode Island	1908	3,599
Vermont	1919	2,956
Virginia	1908	.....
Wisconsin	1911 (1921)	18,054
City systems:		
Chicago	1896 (1907)	11,927
Detroit	1895 (1923)	6,300
Milwaukee	1909 (1921)	2,054
Minneapolis	1909 (1924)	2,344
New Orleans	1910 (1918)	1,619
New York	1894 (1917)	25,995
New York Board of Education	1921	2,507
Washington, D. C.	1920	2,761

Plan Extension of Alaskan Industrial Training

Facilities for industrial training in Alaska will be extended as rapidly as funds will permit, the Bureau of Education has announced. It is the policy of the bureau to give vocational training in the Territory instead of sending natives to the United States for such education, as was formerly done.

Until recently no systematic form of industrial education for Alaskan natives was provided within the Territory. Young Alaskans were sent to the States for vocational training. This policy did not prove satisfactory for the reason that after a stay in the States many of these boys and girls found it difficult to adapt themselves to their home environment. It was also deemed unwise and uneconomic because the change of climate frequently was deleterious to their health.

To meet the foregoing situation, the policy has been adopted of establishing industrial schools within Alaska. Hence industrial schools have been organized at Eklutna, near Anchorage, on the Alaska Railroad; at Kanakanak, on Bristol Bay; and at White Mountain, on Seward Peninsula—all of which are strategic points. Eklutna, being near the Alaska Railroad, is readily accessible for pupils from the interior and from the Upper Yukon region; it can also be easily reached from the settlements on the southern coast. Kanakanak will be the center for

Not all the Good School Nurses are under contract! Here are three available candidates:

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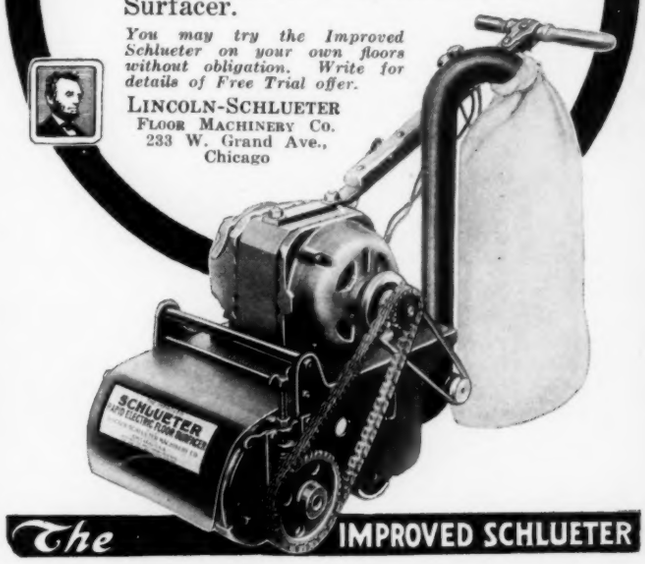

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News of the Month

vocational training for the Aleuts and for the Eskimos of southwestern Alaska. To White Mountain will come the Eskimos of the northwestern region as far north as Point Barrow.

Included in the curriculum of these vocational schools are such industries as house building, carpentry, boat building, furniture making, sled construction, operation and repair of gas engines, marine engineering, navigation, tanning, ivory carving, and basket weaving.

Centuries of experience in the use of tools of their own contrivance have developed in the native races mechanical skill of a high order. This skill enables them to carry out in various modern industries the instruction received in these vocational schools. With very little training the natives excel in mechanical operations. They are especially gifted in ivory carving and basketry.

The three vocational schools in Alaska have proved such a success that it is proposed to extend the facilities for industrial training there as rapidly as funds will permit.

School Laws in Chile

Early in 1923 Chile made school attendance compulsory for children between the ages of seven and fifteen; formerly attendance was required for four years only. Schools are to be equipped as far as possible with playgrounds, gymnasiums, baths, libraries, school gardens, workshops, and other facilities for manual training. Traveling schools are planned for rural districts having no permanent schools.

Employment during school hours of children of school age in factories and other establishments is prohibited, and the administrative officials of the provinces are directed to inspect establishments employing young persons and report violations of the law. Penalties for such violations are prescribed for parents and employers.

The law also plans for the establishment of institutional schools of the cottage type for the care of dependent and handicapped children.

University of London Plans Chair of American History

Establishment in the University of London, England, of a chair for teaching and research in American history, is planned by committees appointed in New York and London to raise an endowment of approximately $150,000. The funds would be used to provide the salary of a professor and to some extent for the maintenance of a library in connection with the department.

The University of London now maintains a lectureship in American history that has made it possible for undergraduate students to devote one-third of their time to American history after 1783, and for postgraduate students to obtain an organized study of American history. Establishment of the chair will not only give the subject university status but will also involve the preparation of textbooks on American history for use in secondary schools in England.

Department of Speech Established in Pontiac

A speech department has been established by the public school in Pontiac, Mich., and the new department offers six courses, for which credit is allowed by the state colleges and universities. The department publishes a semiannual, maintains a little theater of its own, and owns a costume library containing more than 300 custumes. Funds for support of the department are obtained from the presentation of plays and receipts from the costume library.

University Short Courses Gain in Popularity

Institutes, conferences, and short courses, as aids to communities, are offered by the extension divisions of 141 institutions of higher learning, according to a recent statement. Short courses for business men and technical workers are becoming more popular each year.

The conferences or institutes deal with some local or state problem. Short courses are given in a great variety of subjects. Nearly all phases of farm and home problems are studied by large numbers of people in this way. These courses are very much in demand, because of the skill developed by the agricultural colleges in conducting them.

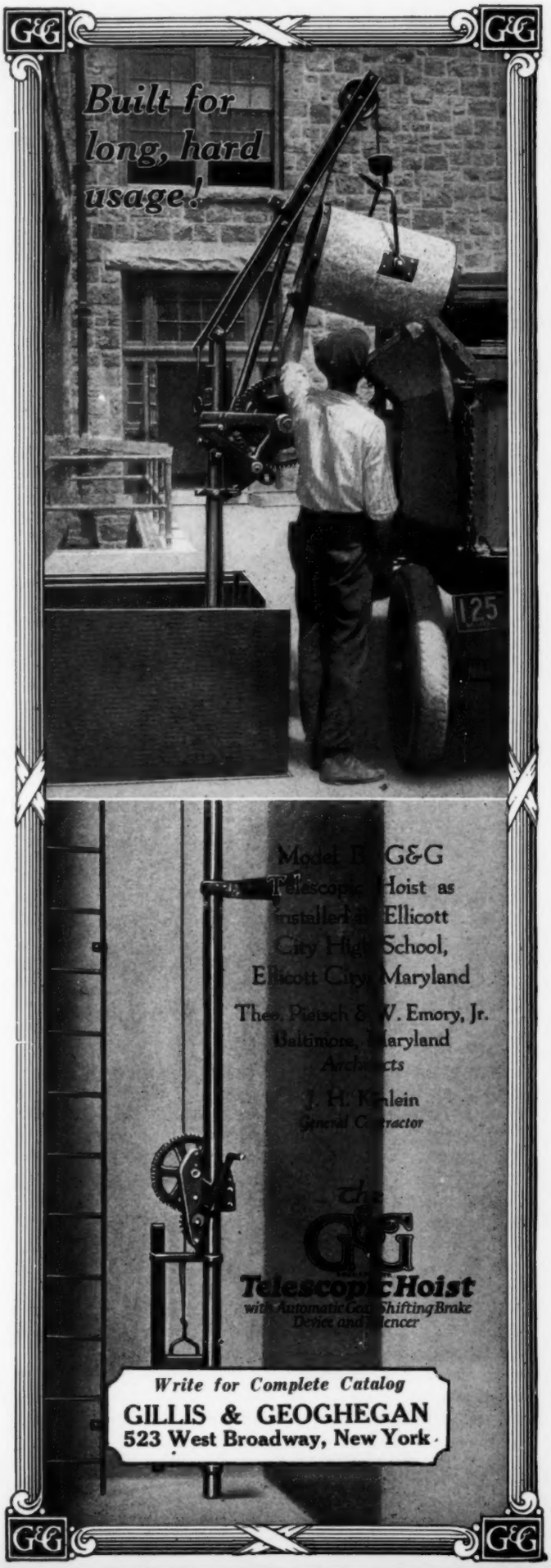
The courses for business men and technical workers deal with such subjects as salesmanship, applied psychology, citizenship, highway engineering, and banking.

English and American Secondary School Study Planned

A co-operative study of English and American secondary schools is proposed by Arthur J. Jones, professor of secondary education, University of Pennsylvania. There has been much talk regarding the relative merits of the two systems, discussion well-intentioned but ill-informed, Professor Jones declares. Until some of the questions commonly asked are investigated, he says, "we very obviously will still be talking largely at random." He states that the purpose of the study is "to promote a better understanding and a closer, more sympathetic relationship between English and American educators, to provide a medium by which the best methods and practices of one system of secondary education may be made known to the other."

The study, as planned by Professor Jones, would be conducted under the general administration of the University of Pennsylvania. Thirty representative schools in each nation would be selected for the process of comparison, and teachers would be exchanged between the two countries without losses in retirement or pension privileges.

This study is planned to cover several years, and involve the co-operation of groups of English and of Amer-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ican educators. It will be in charge of a joint committee of English and American school men and women.

The study will involve a general comparison of the main facts and tendencies in the recent development of secondary education in the two countries and a detailed study of certain selected schools in the two countries. It is hoped that twenty-five or more schools in each country may be sufficiently interested in the plan to co-operate. These schools will be selected, as far as possible, in such a way that results will be comparable. The topics studied will be selected by the joint committee, but will probably include an intimate, comparative study of pupils, teachers, buildings, grounds and equipment, methods, discipline, systems of examinations, and results.

All available statistical data will be secured and carefully compared. If possible, tests will be constructed to secure comparative data. Regular examination questions used in a school in one country may be sent to schools in the other country and results tabulated.

Inadequate Supervision Hinders Commercial Education

"Inadequate state and city supervision 'is the greatest hindrance at present' to the development of co-ordinated programs of commercial education in the secondary schools, universities, and teacher-training institutions," states J. O. Malott, specialist in commercial education.

The number of pupils enrolled in the commercial curricula exceeds the number in any other curriculum except college preparatory, while the number of supervisors is less than in any of the other fields.

The enrollment in the public high schools by courses of study, 1923-24, reveals that the enrollment in the commercial courses exceeds the combined enrollment in all the following courses: Agricultural, home economics, industrial or trade-training, and technical or manual training. Nevertheless, there is a larger number of supervisors in each of these fields than in commercial education.

During the past two years there has been very little increase in the number of supervisors for commercial education in the United States.

Home Purchasing Budget Arranged by Pupils

Problems of purchasing and furnishing homes with limited capital have been studied by the senior high-school pupils in home economics at South Bend, Ind., as a part of their practical work.

These pupils selected for their contribution to "Better Homes Week" for 1928, the problems of the purchase and furnishing of a small home with a limited sum. The following assumptions were made by the class: (1) Annual salary, $2,400; (2) accumulated savings on hand, $1,600; (3) cost of house to be purchased, $6,400; (4) house to be purchased through land contract.

The class based the cost of the house upon estimates advocated in Government bulletins, that is, the cost of a home may be approximately two and one-half times the annual income. Hence, if the house is purchased on land contract ten per cent of the value must be paid down and the rest paid in monthly installments consisting of one per cent of the balance.

This plan, according to the class, makes ownership possible in about eight years and six months.

Of the $1,600 accumulated savings $600 is paid down on the home and $1,000 is spent for furnishings, leaving no debt except the home encumbrance. The class distributed the $1,000 for furnishings as follows: Kitchen, $115.50; dining room, $225.68; living room, $323; bedroom, $296.30; and bathroom, $35.

The class proposed the budget given below for the distribution of the annual salary of $2,400, which is assumed was needed to maintain the home planned at an acceptable standard of living.

The budget allowed for: Food, twenty-two percent; shelter, thirty-three per cent, consisting of monthly installments of one per cent of the total indebtedness on the house, taxes, and insurance; clothing, fourteen per cent; operating expenses, twelve per cent, covering coal, light, gas, water, and general upkeep; higher life, seven per cent, including premium on life insurance policy, dental and medical service, recreation, such as concerts, theaters, books, current literature, and the daily newspaper; and savings, twelve per cent.

Outline Plan for School Community Centers

The schoolhouse may be converted into a community center and made an agency that will provide facilities for organizing and directing the spare time activities of the people, old and young, according to a plan outlined by the Bureau of Education, and now being carried out in hundreds of communities.

School control of recreational activities tends toward municipal economy. Many buildings and playgrounds are now under the control of school boards. These schoolhouses are usually the neighborhood centers from a geographical standpoint.

By a comparatively small expenditure of money, the schools can be made adaptable for uses other than purely educational, and thus become the local points of the neighborhood from a civic and community standpoint. New schools can be and should be planned for a wider use, thus saving future expenditures for alterations. If the school grounds are too small, it is cheaper, as a rule, to enlarge them than to purchase new sites to be used for playground purposes only.

A well-rounded program for play does not consist wholly of games. Many children enjoy handwork, such as sewing, cooking, and manual training, during their spare time. The school often has the equipment for these activities. Besides it also has the necessary rooms for gymnastics, dramatics, vacation clubs, and rainy-day activities—other essential features of a playground program.

New schools can and ought to be planned so that the activities of the recreational department will not seriously

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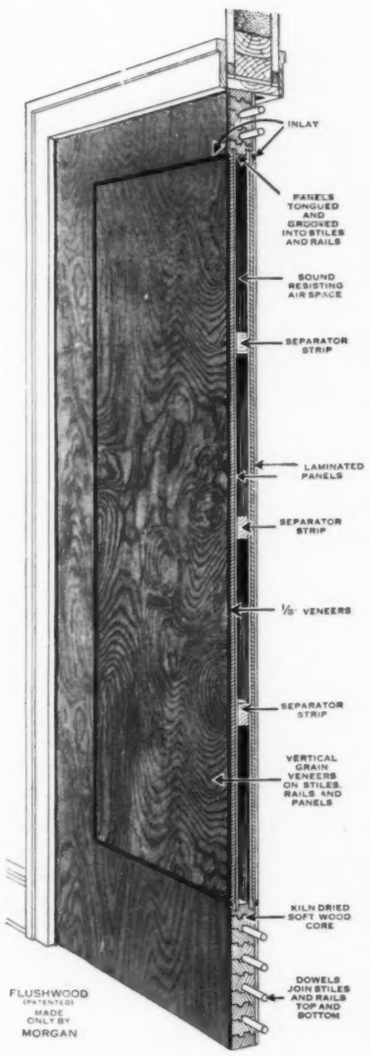
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Two views of the tests are shown below.

(A) Photo showing test of Flushwood Door sound resistance by Doctor Paul E. Sabine in sound chamber of Riverbank Laboratories, Geneva. Organ is operated by observer seated in wood cabinet. (This prevents absorption of sound by observer's clothing.) The time during which the sound remains audible is a measure of intensity of sound in the sound chamber. (See "B" to right.)

(B) Observer with stop watch chronometer, noting the time the sound from the sound chamber remains audible on the further side of the Flushwood door. The difference in the duration of audible sound with the observer —first in the sound chamber and then on the further side of the Flushwood door is a measure of the factor by which the sound intensity is reduced by the Flushwood Door.

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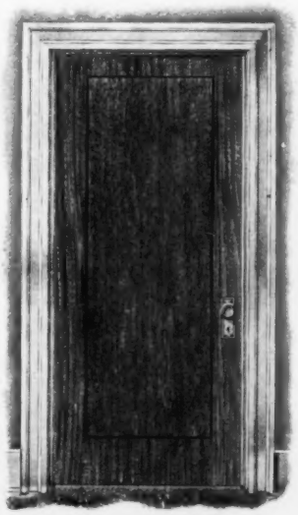

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News of the Month

interfere with the activities of the educational department, and many old schools can, at a small cost, be made adaptable to the use of both departments.

People do not spend all of their leisure time in the so-called play activities; many prefer to spend part of it in study. Hence a community center should conduct classes in English, civics, Americanization work, and promote clubs, such as literary and debating, all of which may be termed the educational activities of a community center. Bands, orchestras, choruses, and library reading have great recreational interests as well as educational values.

The two rooms that contribute most to the success of a community center are the gymnasium and the auditorium. Where both are impossible because of the cost, a combination gymnasium and auditorium is advisable.

The public is more and more demanding a wider use of the school plant. There are cities where the wider usage is in operation, with no detrimental effects to the main purpose of the school education.

Study Problems of Children Having Defective Vision

Problems encountered in the education in public schools of children suffering from permanently defective vision are being studied in two courses at the University of Chicago. It said that the courses deal with administrative pedagogical and ocular problems, and are the first of an advanced series to be given by the school of education and the medical school of the university, primarily for graduate students who have had previous training in the field.

Federal Indian Service Hampered by Lack of Funds

The work of the Federal Indian Service in ministering to the needs of the Indian population is hampered by lack of appropriations, according to a summary of the report on Indian work made by the Institute of Government Research at the request of Hubert Work, the former Secretary of Interior.

This comprehensive survey of the economic and social condition of the American Indians deals with the general policy for Indian affairs, health, education, general economic conditions, family and community life and the activities of women, the migrated Indians, the legal aspects of the Indian problem, and missionary activities among the Indians. Because the full report is so voluminous, the chapter containing the general summary of findings and recommendations has been issued by itself in pamphlet form and may be obtained from the Institute for Government Research.

The purpose of the survey was to determine so far as possible what remains to be done to adjust the Indians to the present standards of civilization so that they may maintain themselves "according at least to a minimum standard of health and decency."

Among their recommendations for immediate action are additional appropriations to provide for the improvement of the diet of Indian children in boarding schools; the establishment of a division to plan and develop a broad educational program for the social and economic advancement of the Indians, and the employment of more medical specialists, personnel officers, and statisticians.

A special emergency appropriation of $5,000,000 is also recommended for classification, salary standardization, and enlargement of the Indian Service personnel, and for public-health clinics and improvements in the schools.

Growth of Physical Education Increases Needs

Physical education in the public schools is in need of better teachers, more teachers, more space, and more time, according to a statement just made by Dr. James Frederick Rogers. Competitive games may influence character and ethics, Dr. Rogers says, but whether for good or bad depends to a large extent upon the physical education teachers.

Whether the activities of this kind are beneficial or "educational" depends largely on the teacher. Such exercises are in themselves by no means dead exercises for all pupils, and it must be remembered that games and athletics are a bore to not a few, especially to those who cannot excel in them. "We need, especially, teachers who are wise enough not to impose upon children physical activities for which they are unfitted, or any kind of physical activity upon children who are more in need of rest," he states.

"We need better teachers of physical education; we need more teachers; we need more space for physical education; we need more time for physical education, for the few minutes a day usually devoted to such activities can be described only as pitiful. We need opportunity after school, and on Saturday, and through the summer holidays. It all pays, for whatever ministers wisely to our instinctive human tendencies and needs ministers to health of mind and body, and health is the first objective in education," he states in conclusion.

Missouri Farm Boys Succeed Financially

Farm boys in the rural high schools of Missouri are succeeding financially through the use of approved farm practices in the handling of their home projects in vocational agriculture, according to Dr. C. H. Lane, chief of the agricultural education service, Federal Board for Vocational Agriculture.

A survey made in 111 schools, Dr. Lane says, shows that in addition to investment in crops, livestock, machinery, fertilizer, and land, 546 out of 3,084 boys had $37,718.57 on deposit in checking accounts; 280 boys had $48,178.65 in savings accounts; and 167 boys had $145,806.05 in stocks or bonds. The amount of the investment increases in proportion to the time spent in vocational courses.

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The sandwich hunger isn't confined to people on an outing. It is likely to crop out almost anywhere in the summer time. A good supply of sandwich-spreads will fortify the cafeteria, the restaurant, the institution, against such demands—particularly if the brand is Edelweiss.

Sandwiches—plain and toasted—are rapidly growing in favor, the year round. The Edelweiss assortment of tasty sandwich-spreads is just the thing to stimulate and satisfy this demand. The finest of ingredients are combined with the utmost skill and care to give them a distinctive flavor that people like.

Order an assortment and try them on your patrons. You will be pleasantly surprised at their reception.

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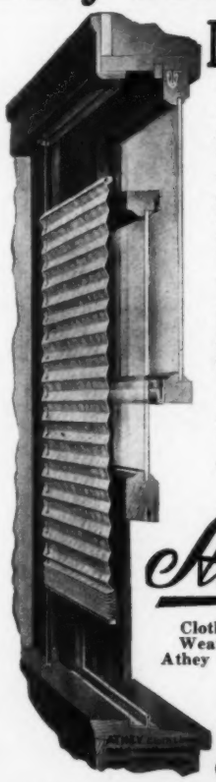

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News of the Month

Plan Open-Air Camps and Schools for Pupils

Open-air schools for anemic and tubercular children and a camp for undernourished children are maintained by the board of public education of Philadelphia, and in a recent report, the division of physical and health education of the board recommends that provision be made to establish camps for all pupils in public schools "in order that children who are normal may keep their health."

Wisconsin Offers Cultural Courses in Extension Center

Cultural courses in philosophy, social science, history, languages and literature, art, biological and physical science, psychology, and home economics will be offered this fall by the University of Wisconsin in afternoon and evening classes at the new university extension center in Milwaukee. The courses are considered an experiment in adult education, and if the demand warrants similar courses will be offered in other centers of the state.

The purpose is to provide the foundation of a liberal education for those who desire it. Although the courses will be on a college or university plane and will be taught by competent instructors they will carry no credit toward a degree; but for completion of ten semester courses, consisting of six of the courses named and four from certain university credit or other specified courses, a certificate in liberal education will be awarded.

Credit from other institutions may be applied toward the requirements for a certificate. Persons working for a certificate will have special faculty advisers.

College Radio Instruction Courses Show Increase

Instruction by means of radio is becoming general with college and university extension divisions. This method, which usually supplements the textbook or other lesson material, involves the broadcasting by the institution of detailed information in regard to the lesson, outlining the main points and explaining the different passages. The student, after receiving the radio instruction and supplementing it by the study of textbooks or other material, writes out his lesson as in regular correspondence courses and sends it to the instructor in charge of the subject at the university.

Some of the advantages of extension work by radio are: (1) It creates more interest and probably reaches many more people than does regular correspondence instruction; (2) it saves time required otherwise for transmitting the lesson by mail to the student; (3) it enables the instructor to give whatever emphasis is needed by using the voice instead of the pen; (4) it enables the instructor to bring into his discussion more timely illustrations of the subject studied than is possible by correspondence courses alone.

Sixty-five institutions report the use of radio either in giving lectures or in conducting other extension work.

Correspondence students through the medium of the radio are the newest members in the household of the college and university extension family. Only a few years ago such a course of study given over the radio was not considered advisable. All that was broadcast by the universities at that time was a program of entertainment—music, a lecture, and the news of the university. That men and women could take a course for credit in such a manner was unthought of and beyond the plans of professors. After four years, courses are given by radio that reach from one state into many states and even to students in other countries.

Honduras Censors Maps Showing Disputed Boundaries

The use in the schools of Honduras of maps, atlases, and texts showing the boundaries of Honduras, unless they have been examined and approved by the Minister of Public Instruction, is prohibited by a recent executive decree, according to a report from the American Consul at La Ceiba, Honduras.

The decree was issued after there had been found on sale in one of the commercial houses of La Ceiba maps of Central America, in which the Republic of Honduras appears with frontiers that are not considered by the government in accord with its claimed territorial rights.

New York City Adopts Minimum Spelling List

A minimum spelling list of 2,500 words that pupils in elementary schools of New York City are expected to acquire as they progress from grade to grade, has been accepted by the board of education of the city. The list was prepared by the director of the bureau of reference, research, and statistics of the board, following a national survey of spelling lists used in leading school systems. The list will form a part of the revised course of study in spelling for elementary schools, soon to be recommended for adoption by the board of superintendents.

Must Eliminate Confusion in Commercial Education

Elimination of confusion between the social-science and vocational objectives of commercial education is essential to permanent progress in that field, according to J. O. Malott, specialist in commercial education.

Responsibility for achievement in the field has been shifted to the making of a balance curriculum, he says. Mr. Malott declares that there is need for a better understanding of the place of commercial education in the general education program.

Many factors have contributed to the confusion be-

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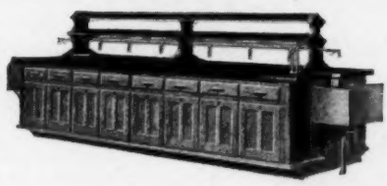

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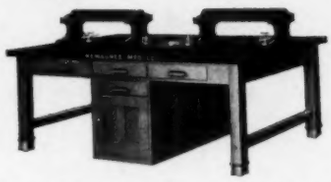

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News of the Month

tween the social-science and vocational objectives. First, there is a need in the social sciences for more economic and business content. Second, in the selection of content for the commercial subjects it is necessary to begin where the social sciences cease. Adequate preparation for office and store positions requires considerably more content bordering on the social sciences than is ordinarily included in the core of those subjects. Preparation for commercial occupations requires the application of much of the social-science content to the performance of specific duties.

Third, there is much similarity between many of the vocational activities and those of every-day life. Some of the vocational content and common skills taught in the commercial subjects have every-day utilitarian and social values, but these values are incidental by-products due to the nature of preparation for commercial occupations instead of arbitrary planning. It is obvious that the present problem of differentiating social-science content from the vocational content is fully as important for the social sciences as for commercial education. A solution of the problem is essential to permanent progress in commercial education.

Indian School System Needs Better Personnel

The American Indian needs education that is less institutional than that which he at present is getting, and which will tend to develop his initiative, according to the report of the Institute for Government Research, which recently made a survey of conditions among American Indians.

The American Indian is capable of acquiring an education that, under proper conditions, will convert him into a useful and productive citizen. The boarding school should be played down and the day school that he can attend while at home should be further developed.

The great need of the Federal Indian school system is a marked improvement in the personnel. Because of the low salaries and the unfavorable working conditions, the Indian Service has, as a rule, been unable to attract the best of the younger teachers. Although it has some good teachers, the general level is below that in the schools of progressive white communities. Low salaries have made it necessary for the Indian Service to adopt low entrance qualifications.

Alabama Trains Blind for Industry

A special service to train blind men and women for positions in industry has been established by the state department of education of Alabama. Recent legislation provides for such service to reach blind persons who have not otherwise been provided for by the state.

The training will be given through the rehabilitation service of the division of vocational education. Institutions for the employment of blind persons have been established in Birmingham and Mobile.

Philadelphia Promotes Saturday Wanderlust Walks

Wanderlust walks on Saturday afternoons are promoted by the division of physical and health education of the board of public education, Philadelphia, according to an announcement. The walks were originally organized for the benefit of teachers in public schools of the city, but are now conducted by a voluntary committee of thirty-four leaders under the classification of extension health work. A printed program of walks is distributed to give detailed information concerning the weekly trips. During the last year forty-seven walks were conducted with a total attendance of 1,467 persons.

Western Reserve Provides Nature Guide School

Professional training for nature guides has been provided in a nature guide school established by the Senior Teachers College of Western Reserve University and the Cleveland School of Education.

The school is located at Western Reserve Academy, Hudson, Ohio, at the northern end of the Alleghenies, where students have access to thirty-one acres of wooded campus and 500 acres of farm land and forest. The school is intended primarily for the professional training of teachers in public schools of Cleveland, but others, both men and women, are accepted as students.

For satisfactory completion of the work in the course of study, credit is allowed toward an Ohio State teacher's certificate, and toward the degree of bachelor in education. Training is expected to fit students specifically for positions as playground leaders, scout and campfire naturalists, nature counsellors in summer camps, nature park guides, and related positions.

Chicago Launches Fifty Million Dollar Building Program

The launching of a fifty million dollar school building program, the largest ever undertaken in Chicago public schools, which will accommodate, when completed in 1929, 70,000 additional children, was recently announced by H. W. Caldwell, president of the board of education of Chicago. First steps toward carrying out this program were taken when bids were advertised on five junior high schools to cost approximately $2,000,000 each, and four elementary schools to cost $700,000 each.

The entire program includes twenty-seven buildings as follows: Elementary schools, twelve; junior high schools, eight; senior high schools, five; and schools for cripples, two. Besides these buildings, additions to twenty-nine other schools are provided.

Facilities will be provided for the following numbers of pupils in the various types of buildings: Elementary schools, 18,000 pupils; junior high schools, 20,000; senior high schools, 17,500; additions to existing buildings, 13,000; and schools for cripples, 2,000.

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In the Educational Field

DR. KENDALL SIEBERT TESH, assistant professor of chemistry, University of Pittsburgh, has been appointed head of the newly organized Junior College of the university, which will open in the fall at Uniontown, Pa.

H. E. ZUEBER, superintendent of schools, Osborn, Ohio, has been elected superintendent of schools, Nelsonville, Ohio.

H. FRANKLIN NORTON, principal of the Central School, Milford, Mass., has resigned and has been succeeded by RICHARD S. BURNAP, who was principal of the Woodbury School, Woodbury, Conn.

WALTER D. TRAUTMAN, professor of German at Western Reserve University, has been appointed dean of Adelbert College, succeeding A. C. JAMES, resigned.

L. H. CHENOWETH, pricipal of the South Charleston High School, South Charleston, Ohio, has been named superintendent of schools, South Charleston, succeeding J. A. OPPY, resigned.

WILLIAM D. POWER has been named principal of the new Arlington Junior High School, Arlington, Mass., which will open in September.

S. C. FRANK, superintendent of schools, Braceville, Ohio, has been named superintendent of schools, Mount Sterling, Ohio.

RICHARD A. JENSEN has been appointed principal of the Schenevus High School, Schenevus, N. Y., succeeding A. HERBERT CAMPBELL

ORVEL C. WEST has been appointed principal of the Hillsboro High School, Hillsboro, Ohio.

BURTIS A. WHITTAKER, supervising principal of the Oyster Bay High School, Oyster Bay, N. Y., for the past fourteen years, has resigned.

HARRY HODSON, superintendent of schools, Clinton County, Ohio, has been elected superintendent of schools, Wilmington, Ohio.

H. FUNK has been elected superintendent of schools, Cedarville, Ohio.

D. H. PATTON, superintendent of schools, Highland County, Ohio, has been elected superintendent of schools, Clinton County, Ohio, succeeding HARRY HODSON.

PAUL E. CROMER, assistant principal of the Parker High School, Dayton, Ohio, has been named principal of the new Lincoln Junior High School, Dayton.

J. ELLIS SHIPE, formerly principal of the Willshire High School, Willshire, Ohio, has been appointed superintendent of schools, Grover Hill, Ohio.

C. H. WILLIAMS, superintendent of schools, Port William, Ohio, has been elected superintendent of schools, Highland County, Ohio, succeeding D. H. PATTON.

MARGUERITE MARQUART has resigned as principal of the Fawcett School of Industrial Arts, Newark, N. J.

PROF. JOHN MONCURE has been appointed president of the Maryland College for Women, Lutherville, Md.

PHILIP E. BAIRD has been appointed principal of the Fostoria High School, Fostoria, Ohio.

DR. G. I. CHRISTIE, director of the agricultural experiment station at Purdue University, has been elected president of the Ontario Agricultural College, succeeding DR. J. B. REYNOLDS.

REV. DR. C. R. MYERS, president of the Hartwick Seminary, Oneonta, N. Y., has been chosen president of Hartwick College, Oneonta.

ELIZABETH CARTER has been appointed principal of the Talbotton Consolidated High School, Talbotton, Ga., succeeding PROF. MARVIN RIVERS, resigned.

ALVAH O. RING has been elected principal of the Groveland High School, Haverhill, Mass., succeeding CHARLES B. LAMB, resigned.

R. M. EYMAN, superintendent of schools, Pleasantville, Ohio, has been elected superintendent of schools, Fairfield County, Ohio, succeeding J. F. BEMILLER.

HARLAN M. BISBEE has resigned as principal of the Robinson Seminary, Exeter, N. H., to become professor of education, University of New Hampshire.

RUBY HASCALL, principal of the Vassar High School, Vassar, Mich., for the past eight years, died recently.

L. V. RUNYAN, assistant county superintendent of schools, Clinton County, Ohio, has been named superintendent of schools, Sabina, Ohio.

DR. JOSEPH EUGENE ROWE, head of the department of mathematics and director of extension in the College of William and Mary, has been chosen president of the Clarkson Memorial Institute of Technology, Potsdam, N. Y., succeeding DR. JOHN P. BROOKS, resigned.

R. H. LICKING, assistant principal of the Kewaunee High School, Kewaunee, Wis., has been elected superintendent of schools, Kewaunee, succeeding W. F. KRUSCHKE.

ORVILLE C. STALEY, principal of the Grove Street School, Irvington, N. J., has resigned.

RALPH BEAUMONT, principal of the Pine Bush High School, Pine Bush, N. Y., has resigned.

CLAY P. KOHR has been appointed principal of the Winfield School, New Philadelphia, Ohio, succeeding R. A. CUSTER, resigned.

O. F. DIETZ has been appointed principal of the Painesville High School, Painesville, Ohio.

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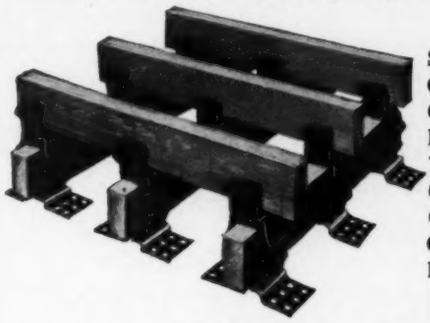
Modern schools are now taking every precaution to rid class rooms of unnecessary distracting noises. Send for interesting engineering data.



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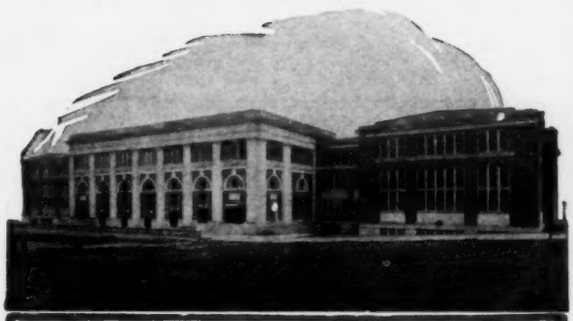

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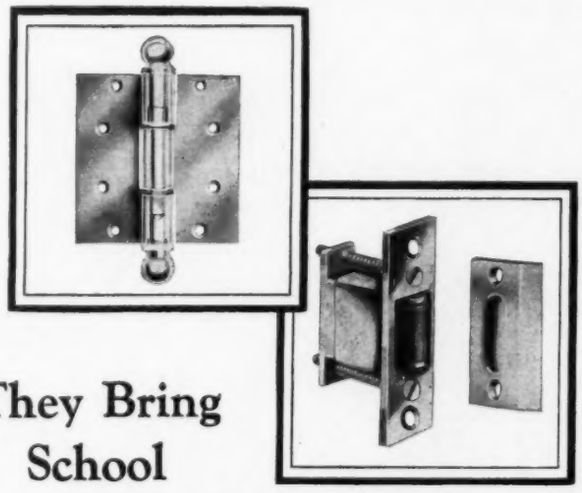

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In the Educational Field

YORKE P. RHODES, principal of the Neptune High School, Neptune, N. J., for the past three years, has resigned.

G. L. ASHBURN, principal of the Bryan Street High School, Dallas, Texas, has been appointed principal of the new Woodrow Wilson High School, Dallas.

NORMAN H. SMITH, formerly vice-principal of the Wicomico High School, Wicomico, Md., has been appointed principal of the Hebron High School, Hebron, Md.

CLIFTON O. PAGE of the Lawrenceville School, Lawrenceville, N. J., has been chosen to succeed James T. Barrett, who recently resigned as headmaster, Boys Preparatory School, Indianapolis, Ind.

PROF. LUCIUS LAMAR has been appointed principal of the Fitzgerald High School, Fitzgerald, Ga.

W. R. HULL has been appointed principal of the Fillmore Union High School, Fillmore, Calif., succeeding J. B. ELY.

PROF. J. H. HOWELL, principal of the Lamar County High School, Vernon, Ala., has resigned.

G. A. SOUTHWICK has been appointed superintendent of schools, Mt. Victory, Ohio, succeeding O. M. WISEMAN, resigned.

HELEN I. BRADLEY, principal of the Irving School, Derby, Conn., has resigned.

M. J. HARKNESS, vice-principal of the Coachella Valley Union High School, Coachella Valley, Calif., has been appointed principal of the Victor Valley High School, Victorville, Calif., succeeding FRED M. POWELL, resigned.

GEORGE COLLEN has been appointed principal of Virginia Junior College, Roanoke, Va., succeeding MRS. JULIA A. CULLER.

CLAUDE M. HENRY of South Dakota has been reappointed by President Coolidge to be a member of the Federal Board for Vocational Education for a term of three years, beginning July 17, 1928.

J. R. CLEMENTS has been appointed principal of the Sulligent High School, Sulligent, Ala., succeeding W. D. NEWMAN.

A. L. KEENEY, superintendent of schools, Byron, Wyo., for the past two years, has resigned.

JAMES H. DICK, principal of the Mohegan Modern School, Peekskill, N. Y., has resigned to become head of the Modern School, Stelton, N. J.

HOWARD A. KINHART, principal of the Pocomoke High School, Worcester County, Md., has been appointed principal of the Annapolis High School, Annapolis, Md., succeeding LOUISE W. LINTHICUM, who will become principal of the Arundel High School, Millersville, Md.

H. M. TARDY, superintendent of schools, Glenrock, Wyo., has resigned.

J. T. KING, principal of the McMechen School, Wheeling, W. Va., for the past thirty-seven years, has resigned.

MRS. MARY A. MONROE, principal of the Lincoln School, Spokane, Wash., for the past thirty-nine years, has tendered her resignation.

PROF. A. S. SCOTT, principal of the Pickens County High School, Reform, Ala., recently resigned to become principal of the Fayette County High School, Fayette, Ala.

KENNETH HOOE has been elected principal of the Homer school, Homer, Ill.

LEON C. HIGH has been appointed principal of the new Teaneck High School, Hackensack, N. J., which will open in September.

JOHN T. SYMONS has been appointed superintendent of schools, Coldwater, Mich.

DR. J. D. FALLS, principal of the Ashland Senior High School, Ashland, Ky., for the past five years, has been elected superintendent of schools, Ashland.

ERNEST D. JACKMAN, principal of the Dalton High School, Pittsfield, Mass., has resigned.

PROF. C. A. MASSEY, principal of the Wayne County Agricultural High School, Waynesboro, Miss., has resigned to become principal of the Pachuta High School, Pachuta, Miss.

WALLACE L. ERNHOLT, superintendent of schools, Tiro, Ohio, has been appointed superintendent of schools, Carey, Ohio.

W. R. LECRON, dean of the Swarthmore Preparatory School, Swarthmore, Pa., has been appointed head of the York Collegiate Institute, York, Pa., succeeding DR. C. H. EHRENFELD.

ERNEST MARSCHALL, formerly principal of the Riverton High School, Riverton, Wyo., has been elected principal of the Powell High School, Powell, Wyo.

EARL V. O'DONNELL has been appointed principal of the Williamstown High School, Williamstown, W. Va.

KENYON L. BUTTERFIELD has resigned as president of the Michigan State College, and has been succeeded by DEAN ROBERT S. SHAW.

RALPH E. ROBBINS, principal of the South Gardiner School, Gardiner, Me., for the past three years, has resigned.

MRS. ELMER KREBERNIC has been elected principal of the Shiloh school, Shiloh, N. J.

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This table serves a dual purpose of laboratory and recitation table where students may face one way. Its dual purpose effects a conservation of space.

Write for Laboratory Catalog No. 14-H.
Library Catalog No. 15-H.

LEONARD PETERSON & CO., INC.
Manufacturers of guaranteed Laboratory and Library Furniture
Office and Factory
1222-34 Fullerton Avenue **Chicago, Illinois**
Distributors conveniently located to serve you.

The U-21 Is Unexcelled for School Use

THE U-21 is a late development in single spindle boring machines. It is different—improved—better adapted to meet modern conditions. It is a light machine but of much more massive and rigid construction than others so that it will handle much heavier stock than is ordinarily assigned to a light machine. It is therefore better adapted to all school needs than any other borer of its type.

Refinement in design and construction is noted in every detail. Note the rigid, massive base and column. Also that foot treadle is adjusted conveniently on the outside of the base. A hand crank, actuating an acme threaded screw, gives table adjustment to a thousandth of an inch if necessary. Ask for the illustrated bulletin giving all the superior details of its construction.

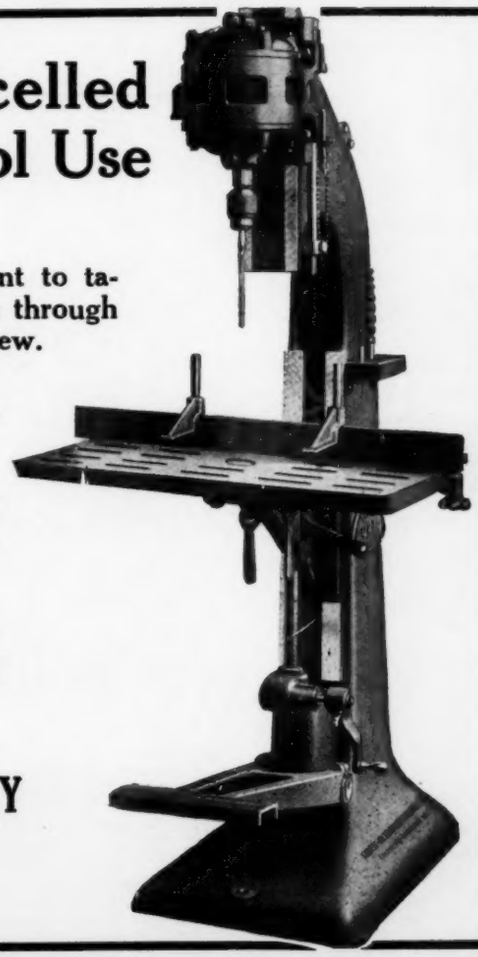
Train Your Students Today on Machines They Will Use Tomorrow

Vertical Adjustment to table by hand crank through Acme threaded screw.

Does End or Edge Boring.

Fence adjustable to any angle on table.

Foot Treadle easily adjusted to suit any operator.



YATES-AMERICAN MACHINE COMPANY

Educational Department

BELOIT, WIS.

In the Educational Field

CHARLES M. KING, principal of the Springfield Junior High School, Springfield, Mass., for the past five years, has resigned and will become headmaster of the Pembroke School, Kansas City, Mo.

LEWIS E. BUELL has been elected principal of the Nelsonville High School, Nelsonville, Ohio.

ANGUS I. MESSICK, principal of the Jasonville High School, Jasonville, Ind., has been elected principal of the French Lick High School, French Lick, Ind., succeeding CLEOPHAS F. HENDERSON, resigned.

HARRY A. GROVE has been elected supervising principal of schools, Greencastle, Pa., succeeding REV. W. MORGAN CROSS, resigned.

R. L. MARCHMAN has been elected principal of the Punta Gorda High School, Punta Gorda, Fla.

REV. DR. F. BOYD EDWARDS has resigned as headmaster of the Hill School, Pottstown, Pa., and JAMES I. WENDELL, assistant headmaster, has been appointed acting head.

EDWIN E. HIGGINS has been elected principal of the Gallipolis High School, Gallipolis, Ohio.

ARTHUR W. FULTON has been appointed principal of the Lincoln School, Kenilworth, N. Y., succeeding MRS. T. W. HAUSAUER.

CLINTON S. BASSETT has been appointed principal of the New Market High School, New Market, N. J.

FRANK L. EVERSULL, principal of the Woodbridge School, St. Louis, for the past six years, has been named principal of the new East St. Louis Junior and Senior High School, East St. Louis, Ill.

PROF. W. J. BROWN, principal of the Kirksville High School, Kirksville, Mo., has resigned.

GEORGE A. FROBERGER, principal of the Warren High School, Warren, Me., for the past two years, has been elected principal of the Hallowell High School, Hallowell, Me., succeeding JOSEPH E. BLAISDELL, who was elected principal of the Rockland High School, Rockland, Me.

RAYMOND W. ARNOLD has been appointed principal of the new Roosevelt School, Kenmore, N. Y., which will be opened in September.

WILLIAM H. TURNEY has been appointed principal of the Julia Landon High School, Jacksonville, Fla., succeeding ROBERT C. MARSHALL.

CLEOPHAS F. HENDERSON, principal of the French Lick High School, French Lick, Ind., has been elected principal of the Bloomfield High School, Bloomfield, Ind., succeeding E. N. BRINDLEY, resigned.

RAYMOND E. PINKHAM, principal of the West Orange Junior High School, West Orange, N. J., has been appointed supervising principal, Weehawken, N. J.

JEAN P. BOOTH has been appointed principal of the Kinston High School, Kinston, N. C.

GEORGE RHODES has been appointed principal of the Millville High School, Millville, N. J., succeeding MAX BRUNSTETTER, resigned.

PAUL W. OVERMAN, principal of the Wayne School, Union City, Ind., has been appointed principal of the Columbia City High School, Columbia City, Ind.

NEIL M. GOOD, principal of the Somerset School, Somerset, Ind., has been appointed principal of the Wabash Junior High School, Wabash, Ind.

MRS. FLORENCE SCHEE ROBNETT has been named dean of women at Northwestern University, succeeding MRS. WINIFRED G. RICHARDSON, resigned.

JAMES C. COX has been named principal of the Sherrard High School, Sherrard, W. Va., succeeding E. E. STUTZMAN.

ROBERT C. MARSHALL, principal of the Julia Landon High School, Jacksonville, Fla., has been appointed principal of the Robert E. Lee High School, Jacksonville, succeeding E. L. LOUNSBURY, who was appointed principal of the Central Riverside School, Jacksonville.

IRA BAUMGARTNER, superintendent of schools, Dola, Ohio, has been appointed superintendent of schools, Monclova, Ohio.

HARRY A. TITCOMB has been appointed principal of the Neptune High School, Neptune, N. J.

PROF. A. SELTZER has been elected principal of the St. Clair High School, St. Clair, Pa., succeeding CHARLES R. BIRCH, who was appointed superintendent of schools, St. Clair.

QUINCY G. VINCENT, principal of the Farrell Junior-Senior High School, Farrell, Pa., has been appointed superintendent of schools, Ford City, Pa., succeeding R. D. WELCH, who resigned to become superintendent of schools, Kane, Pa.

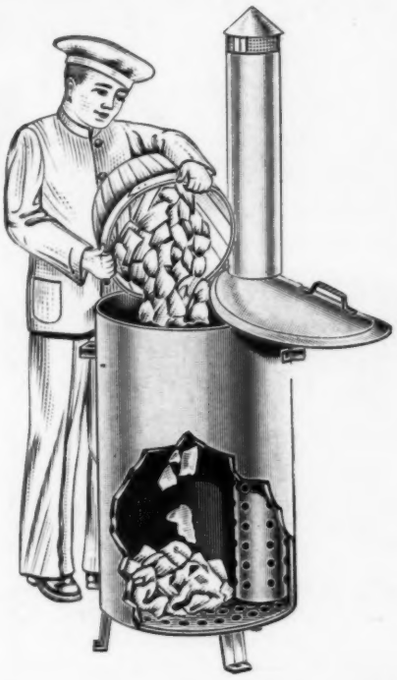
SIR GEOFFREY BUTLER, senior burgess in Parliament for the University of Cambridge, has been appointed president of Corpus Christi College, Cambridge, succeeding REV. C. A. E. POLLOCK.

DR. MERVIN GRANT FULLER, dean of Dickinson College, Carlisle, Pa., has been chosen president of the college, succeeding DR. JAMES H. MORGAN, who recently tendered his resignation.

L. E. GRABER, principal of the LeMars High School, LeMars, Iowa, for the past three years, has resigned.

CHARLES G. FRASER, principal of the Charles G. Fraser School, Toronto, Ont., for the past twenty years, has retired after serving fifty years in the schools of the province.

Dispose of All School Rubbish and Litter in a Quick, Easy and Safe Way



YARD-BOY Incinerator

A compact, inexpensive, efficient, portable incinerator that can be placed anywhere on the grounds making disposal of refuse of all kinds a clean, safe, swift task. Constructed of heavy Wilder steel, aluminum color, non-rusting. The patented perforated inner flue produces a down draft resulting in downward burning — hence no objectionable smoke or odors. Hundreds in use by schools, colleges, Universities, etc.

SPARK PROOF

Burns anything burnable.
Contents always out of sight.
No fire visible during burning.
Not affected by wind, rain, or snow.
Requires no attention during burning.
Nothing to get out of order.

Made in 1½, 3, 6, and 10 bushel capacities.

Send for full details and low prices.

YARD-BOY INCINERATOR CO.
10 East Huron Street
CHICAGO

The Door That Waits

for the touch of a hand when silence and attention are vital.

ASK a school teacher how many distractions the average child reacts to. Mention the slam of a door. She can visualize the situation for you . . . Mid-afternoon . . . Pupils inclined to restlessness . . . Held to attention . . . Bang! . . . Forty heads turn . . . Attention wavers . . . Seconds lost . .

No longer at the mercy of every breeze, doors with "Rixson-Friction" protection stand ajar, or wide open just as desired, *and stay there,* without stops or holders. The boy in a hurry cannot make them slam.

This hinge is designed on the simple principle of the brakeband. The center knuckle has a flat extension which passes around the pin, and screws are threaded into this extension. The friction is applied by turning these screws. There is a perforated sleeve surrounding the pin; the perforations retain the grease which serves as a lubricant to eliminate all possible chance of noise.

Write for detailed description and list of outstanding installations.

far more friction surface than any other type

No. 85 Loose-Pin Type

Friction Hinge

THE OSCAR C. RIXSON COMPANY
4450 Carroll Ave., Chicago, Ill.
New York Office: 101 Park Ave., New York, N. Y.

RIXSON
Builders' Hardware

Overhead Door Checks	Friction Hinges	Casement Operators
Floor Checks, Single & Double Acting	Adjustable Ball Hinges	Casement Hinges
Olive Knuckle Hinges	Concealed Transom Operators	Butts, Pivots and Bolts
		Door Stays and Holders

The Hotel Baltimore in Kansas City

500 Rooms
RATES
$2.00 to $5.00
Featuring—
Central Location
Large Comfortable Rooms
Spacious Lobby
Marble Coffee Shop
TABLE D'HOTE
Lunch 75c
Dinner . . . . 85c & $1.25
Also A la Carte Service

SANISTEEL
Movable Chair Desks

FOR LESS MONEY THAN THE OLD STYLE

Large $4.95
Medium 4.80
Small 4.65

We produced the first steel desk and other school furniture made of sanitary steel. Our products are still in the lead for sanitation and correct posture.

For First Aid and Hospital Room.

Send for Catalogue.

COLUMBIA SCHOOL SUPPLY CO.
INDIANAPOLIS, INDIANA

Penn Charter School, Germantown, Pa. Zantzinger, Borie and Medary, Architects, Philadelphia, Pa.

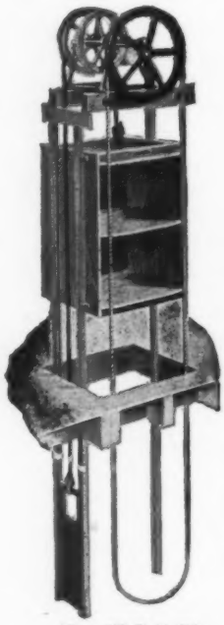
Roddis Flush Doors
Preferred for Schools

THE unusual fire-resistant, sound-proof and sanitary features of Roddis Flush Doors cause them to be specified by leading architects for modern school buildings.

Roddis Flush Doors are supplied in any finish veneer. All have the solid white pine core and hardwood edge strips at top, bottom and sides to protect the softwood core from moisture. Two crossbands and two surface veneers cover the solid core. Write for catalog and full information.

RODDIS DOORS
RODDIS LUMBER AND VENEER COMPANY
126 Fourth Street Marshfield, Wisconsin
Distributors in all Principal Cities

SEDGWICK
DUMB WAITERS AND ELEVATORS



Type "F D C G"

The new Sedgwick Type "FDCG" Geared Automatic Brake Dumb Waiters are designed for school, college, and similar service where average loads range from twenty-five to seventy-five pounds and occasional loads up to two hundred pounds.

Other Sedgwick Outfits are suitable for other requirements.

Write for New Catalog and Consult our Service Department.

Sedgwick Machine Works
165 West 15th Street NEW YORK
Manufacturers of Ash Hoists, Sidewalk Elevators, Trunk Lifts, Etc.

If Rattling Chairs Annoy You—

You will be interested in CLINCHER CUSHION CHAIR TIPS. They eliminate noise effectively and economically. Save your chairs, your floors, and your nerves.

A line from you will bring you samples without obligation.

Clincher Cushion Chair Tip Co.
Box 295, Fullerton, Calif.

BY ACTING NOW
You Can Have a

Wayne Steel Sectional Grandstand

On Your Athletic Field When School Reopens In The Fall

Don't wait until shortly before your opening game.

Write now, for prices and catalog.

Wayne Iron Works

Lincoln Highway & Pembroke Avenue, Wayne, Pa.

Representatives in:

Baltimore; Cambridge, Mass.; New York; Indianapolis; Lansing, Mich.; Eau Claire, Wis.; Minneapolis, Minn.; Lincoln, Nebr.; Kansas City.

An Applicator Bottle

furnished with our compliments in your own medicine cabinet will soon convince you that

MERCUROCHROME—220 SOLUBLE

(dibrom-oxymercuri-fluorescein)
IS THE

Logical Successor to Tincture of Iodine

FOR

First Aid Prophylactic and General Antiseptic Use

Mercurochrome stains as Iodin does, and it is the stain of Mercurochrome, as it is of Iodin, that shows just where and how effectively the germicide has been applied; it fixes the bactericidal agent in the field for a relatively permanent period which prolongs the asepsis or the sterilizing effect, and it provides for demonstrable penetration into the tissues beneath the superficial surfaces. Inasmuch as Mercurochrome is definitely proved an extremely efficient general antiseptic, it is only reasonable to consider it the successor to Iodin in this field, as it is free from the objectionable features of Iodin, for

MERCUROCHROME DOES NOT IRRITATE, BURN OR INJURE TISSUE

SELL YOURSELVES FIRST

HYNSON, WESTCOTT & DUNNING

BALTIMORE, MD.

HYNSON, WESTCOTT & DUNNING,
DEPT. N, BALTIMORE, MD.

Please send me Mercurochrome Applicator Bottle for personal use.

Name .....

Business Address .....

Front and Back as well as in the Middle

THE complete service of such publications as The NATION'S SCHOOLS extends from cover to cover—not merely from the first to the last page of the editorial text. In the front and back—the advertising pages—are the messages of industry, broadcasting each month important information that has bearing on the development and betterment of school facilities. Here school administrators receive a value equal in the most part to the editorial pages, for here they are put in regular and constant touch with all progress that concerns the physical makeup of the school. For example, the following paragraphs, quoted from advertisements in this issue of The NATION'S SCHOOLS, tell us that:

"In keeping with the modern trend in school architecture and decoration, your dormitories and bedrooms may now include furniture that confers an atmosphere of homelike comfort, of warm personal welcome . . . in cheerful color combinations, or in exact reproductions of fine hardwoods."

"Ask a school teacher how many distractions the average child reacts to. Mention the slam of a door. She can visualize the situation for you . . . Mid-afternoon . . . Pupils inclined to restlessness . . . Held to attention . . . Bang! . . . Forty heads turn . . . Attention wavers . . . Seconds lost . . ."

"To stimulate and arouse interest—use motion pictures in your work. Thousands of schools are now using motion pictures and profiting by the results they bring."

"It is evidence, also, of the growing recognition—in public institutions and business establishments that cleanliness is a profitable factor of service—and that 'cleanliness begins with clean floors.' . . . In schools 'clean enough' floors should not be tolerated—floors must be clean."

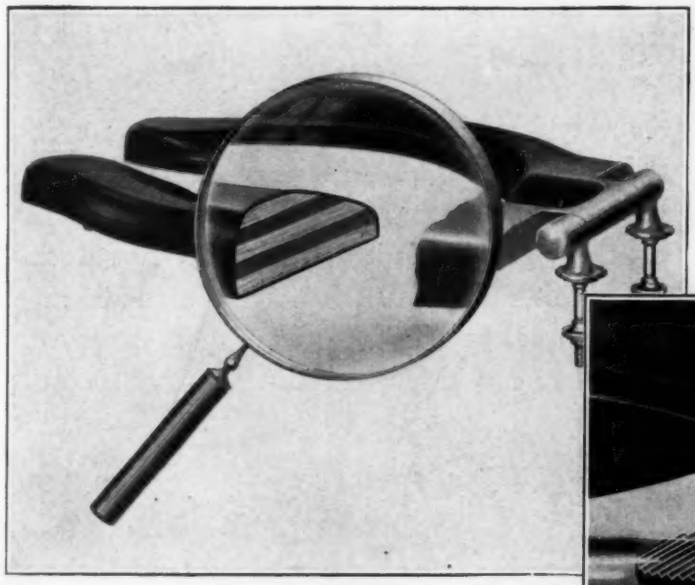
"Cost of cleaning material is a part of your total cost of cleaning, to be sure. But only a part. Other things have to be considered, too—such factors as the cost of using the material—labor costs—and the amount of cleaning a given quantity will do."

"This sound-quieting makes it much easier for students to concentrate—saves them from the mental slowdown that comes from fatigued nerves."

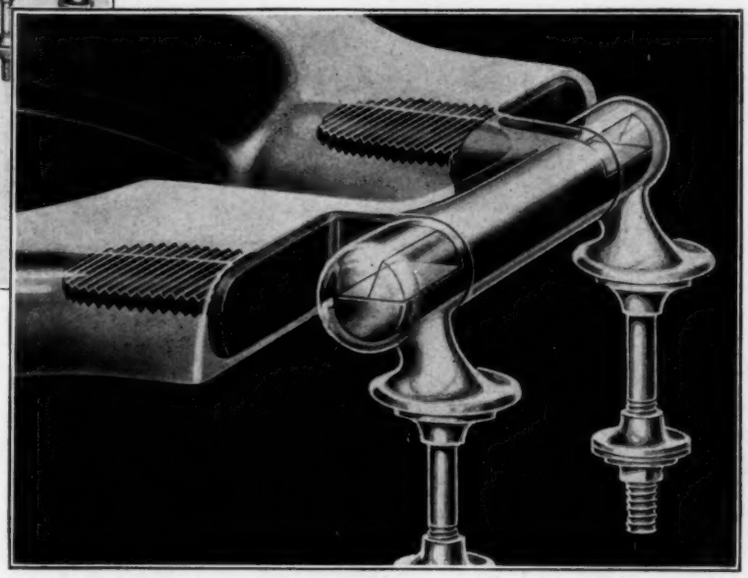
"The effect of this exclusive process—unlike a mere surface coat or veneer—is to penetrate and seal every tiny pore of the linoleum, producing a unique, soil-proof super-finish which prevents the absorption of dirt and liquids."

Only those offering approved products or services for schools are invited to use the advertising pages of The NATION'S SCHOOLS

You Pay No More *to get these important features*



(1) **The new Whale-bone-ite Hinge.** Makes both seat and hinge one unbreakable, solidified unit, impervious to moisture, absolutely non corrosive. No other closet seat offers you this hinge.



(2) **Whale-bone-ite's inner construction.** Laminated, alternating grain, hardwood core makes the Whale-bone-ite Seat proof against splitting, warping or cracking. Every Whale-bone-ite Seat is guaranteed for the life of the building.

A WHALE-BONE-ITE Seat costs no more than the cheapest composition closet seat. This is a fact every architect and building operator should know.

Why pay the same and miss out on the better construction, the exclusive improvements, that have made the Whale-bone-ite Seat known everywhere as the world's finest closet seat?

The Whale-bone-ite Seat is one piece . . . molded when soft into shape around a core of alternating-grain layers of hardwood. It has no cracks or joints to harbor germs. No thin veneered surface to wear through. Easy to clean, non-inflammable, its beautiful surface will last a lifetime.

The new Whale-bone-ite hinge on this famous closet seat is molded in one operation as an integral part of the seat. Reinforced by a metal, die-cast, one-piece insert, it is covered with highly-polished Whale-bone-ite having the same strength and finish as the surface of the seat. Any model of Whale-bone-ite Seat may be obtained with this new hinge.

When you select a closet seat, insist on getting the genuine Whale-bone-ite. Refuse imitations. Only a Whale-bone-ite Seat is "like Whale-bone-ite."

WHALE-BONE-ITE TOILET SEAT

THE BRUNSWICK-BALKE-COLLENDER COMPANY · CHICAGO

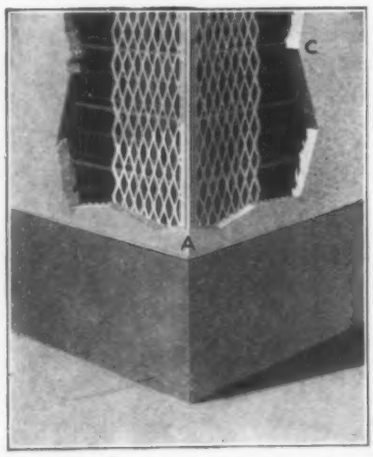
Albany	Boston	Chicago	Dallas	Detroit	Kansas City	Minneapolis	Philadelphia	San Francisco	Tampa	Ottawa
Atlanta	Buffalo	Cincinnati	Denver	Harrisburg	Los Angeles	New Orleans	Pittsburgh	Seattle	Washington	Toronto
Birmingham	Charlotte	Cleveland	Des Moines	Houston	El Paso	New York	Richmond	St. Louis	Montreal	Havana

For free cross-section of a Whale-bone-ite Seat, address Dept. 273, Seat Division, The Brunswick-Balke-Collender Co., 623 South Wabash Avenue, Chicago

MAINTENANCE COSTS AND SAFETY DEMAND WALLS BUILT THIS WAY

SCHOOL BOARDS the country over now favor walls built on Metal Lath. For example, a wall plastered on MILCOR Stay-Rib Metal Lath, reinforced and protected at both the inner and outer corners, has been accorded a one-hour rating by the Underwriters Laboratories . . . This minimizes the fire hazard, reduces insurance rates and protects children's lives. Then too, walls built this way never crack and fall to pieces . . . Maintenance costs are saved. Patented features also effect considerable savings in erection costs.

WALLS in the Shreveport high school building here illustrated are protected with Milcor Firesafe Sheet Metal Products. Edw. F. Neild was the architect and T. Balf the plastering contractor.



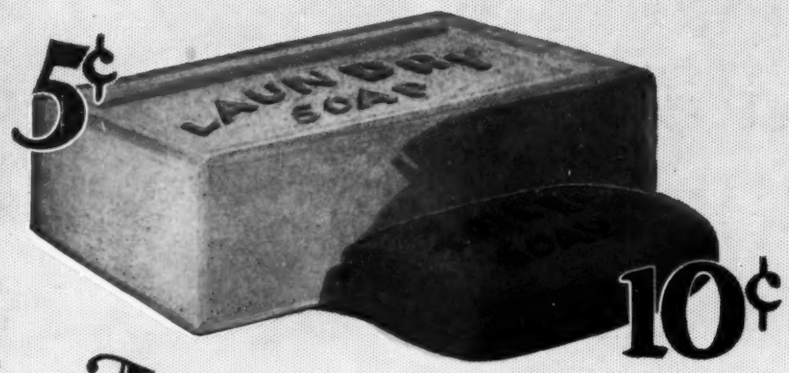
THE illustration above shows a wall corner with section cut away. Note the expansion wing of the protecting corner bead and the reinforcing ribs of the Stay-Rib Metal Lath. These patented features permit a perfect plaster bond and are found only in Milcor products.

A valuable data book on Firesafe Wall Construction will be sent without cost to School Board Members, Superintendents, Architects, Engineers or Contractors . . . write

MILCOR

MILWAUKEE CORRUGATING COMPANY - MILWAUKEE, WISCONSIN

Chicago, Ill. Kansas City, Mo. La Crosse, Wis.



Is Soap Solids all that Counts?

NO! And Yet many people believe it. But consider the two bars of soap illustrated above. The large bar of laundry soap costs 5c. The small bar costs 10c. For one-fourth the quantity of soap, you willingly pay twice as much. Why? Because the *quality* of the toilet soap is much better suited for use on the human skin than the laundry soap which is strongly alkaline and made from the cheapest ingredients. Don't be satisfied merely to know the percentage of soap solids for

Quality OF SOAP SOLIDS COUNTS TOO..!

How the soap is made and whether the soap solids are made from the finest ingredients has much to do with your satisfaction in the use of a liquid toilet soap. In Liqua-San the soap content is guaranteed in writing on every container, but your best guarantee is the Laboratory Method of Manufacture from the finest obtainable ingredients which assures that soothing quality, rich lather, quick cleansing properties.

Write today for more information about

LIQUA-SAN

The Pure Liquid Toilet Soap

The Huntington Laboratories

INCORPORATED

Huntington, Indiana

HUNTINGTON LABORATORIES

Liqua-San is made from the finest obtainable edible cocoanut oil and American potash. The raw materials are chemically tested and balanced in the manufacture and the cooking process is carefully controlled to give an absolutely neutral, perfect liquid Soap. The glycerine content is not removed.

Liqua-San is never rancid nor alkaline, never thin or watery. It is absolutely uniform because it is made by the laboratory method which assures standardized quality.

You save the difference between cheap soap and Liqua-San in freight alone when you buy concentrated Liqua-San. If you must thin it, water is practically free, so don't pay freight on it. It is more satisfactory however, to use Liqua-San "T" or "M" just as it is manufactured, for just a few drops makes mountains of lather and it isn't wasted as much as a thin soap would be.

LIQUA-SAN

The Liquid Soap-

Liqua-San "C", the concentrated form is the soap to buy when you wish to make your own soap solutions for it is easily handled and saves time. You can make soap at any price by diluting Liqua-San "C" to your own formula and yet have a better soap than you can possibly buy if you buy on price in the beginning.

You'll say "That's the first Real Liquid Soap I ever used!"

for floors of all kinds

FINNELL

for business
for homes

TWO years ago we decided to try out the Finnell System of electric scrubbing in the care of our buildings. Before this time we had made use of a large force of floor scrubbers, but were unable to keep our floors in good clean shape. Your equipment enables us to keep the floors in our thirty-two buildings in first class condition at a saving in labor cost far beyond our calculation. We recommend it highly.

Yours very truly,

Chas. T. Woollen,
Business Manager,
THE UNIVERSITY OF NORTH CAROLINA

The Only Way
30 Years Ago

Now—more than 10,000 users

Nearly tripled in four years! There is no more striking evidence of the growth of the *electric* scrubber-polisher idea than the growth of the company that made the first power driven floor machine. It is evidence, also, of the growing recognition—in public institutions and business establishments—that cleanliness is a profitable factor of service, and that "cleanliness begins with clean floors."

The list of those who have adopted the FINNELL System of polishing and scrubbing would read almost like a "who's who in business and industry." It includes establishments of all kinds—hospitals and hotels, factories and stores, banks, bakeries and schools. There is no place where the public gathers to work, study, play, eat, sleep or be amused, where the FINNELL is not or cannot be used to the advantage of all concerned.

In schools "clean enough" floors should not be tolerated—floors must be *clean*. You cannot avoid the responsibility to give attention to this subject. Proper floor cleaning should never be considered an expense—though with FINNELL methods, such expense is cut to the minimum.

For every school there is an efficient and economical FINNELL System—eight sizes of scrubber-polishers permit adaptation to any needs. FINNELL floor maintenance engineers will gladly examine your floors, tell you the best way to care for them, and show you the cheapest and most efficient method. To get this information does not cost you more than a postage stamp. Write us today. Address FINNELL SYSTEM, INC., 368 East St., Elkhart, Ind. Also Standard Bank Bldg., Ottawa, Ontario, Canada. Factories: Elkhart, Ind., Hannibal, Mo., and Ottawa, Ont., Canada. District offices in principal cities.

It waxes
It polishes
It scrubs

FINNELL
ELECTRIC FLOOR MACHINE